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I Sailed with Portugal's Captains Courageous
With 2 Maps and 30 Illustrations
21 in Natural Colors — ALAN VILLIERS

The Making of a West Pointer
With 25 Illustrations — HOWELL WALKER
17 in Natural Colors — B. ANTHONY STEWART

Cyprus, Idyllic Island in a Troubled Sea
With Map and 39 Illustrations
32 in Natural Colors — JEAN and FRANC SHOR

Nature's Tank, the Turtle
With 18 Illustrations — DORIS M. COCHRAN
8 Paintings in Natural Colors — WALTER A. WEBER

Thumbs Up Round the North Sea's Rim
With Map and 15 Illustrations — FRANCES W. JAMES

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THE NATIONAL GEOGRAPHIC MAGAZINE

I Sailed with Portugal's Captains Courageous

By Alan Villiers

With Illustrations from Photographs by the Author

FOUR hundred and fifty years ago, Portuguese in sturdy sailing ships were crossing the Atlantic on the spring east wind to fish the Grand Banks off Newfoundland, 2,000 miles away. They fished with hook and line, filled their holds with cod, and raced for home before the fierce northern winter caught them.

Fogs, gales, and freezing weather took their toll each year, and still the fishermen sailed, for cod had come to mean the difference between food and hunger in much of southern Europe. Salt cod was eaten on Catholic fast days and formed part of army rations.

New Ships, Old Dangers

In the 1950's a fleet of Portuguese sailing ships still sets out each spring for the Grand Banks. Though time has brought changes in the size, shape, and gear of the ships, the 2,000 hardy fishermen who man the fleet face most of the same hazards their ancestors did.

Early in the spring of 1950 I shipped out with the Portuguese fishing fleet of 32 sailing vessels in the graceful steel four-master *Argus*, built in 1938-39, queen of the banking ships. I had arrived in Lisbon (Lisboa) in early March, to get a look at the background first.

The sailing vessels, I learned, still depend mainly on the wind, though they now have Diesel engines to help out when necessary. They also have electric lights, steam heat, and refrigeration. Power winches, within the memory of some of the older fishermen, have done away with the backbreaking job of raising and lowering sails and anchors.

But the fishing itself, the sea, and the danger are unchanged. The men still fish in the classic way: in the morning each sets out alone in his small one-man dory, pitting himself, his skill, and his luck against the ocean.

I picked up the *Argus* in the broad River Tagus, or Tejo (page 570), where the fleet of hand-liners was assembling for the blessing service. It was held in Belem's famed Monastery and Church of the Jeronimos, built in the 16th century as a thank offering for the successful voyage of Vasco da Gama.*

For the blessing, the church was crowded with dorymen, all in colorful checked shirts and high sea boots. Schooner captains were there, also admirals and ministers of state, dignitaries of the Church, and people of Lisbon.

I tiptoed past the tombs of Vasco da Gama and the poet Luis Vaz de Camoëns and listened to the words of the Archbishop of Mytilene, himself the son of a drowned Grand Banks dorymen, as he blessed the fleet.

Outside, the schooners were brave with bunting. They looked like lovely yachts ready to set out upon an ocean race. Fleet of line and graceful, tall-masted and serene, they waited. But the east winds of spring were blowing and this was the time to sail.

Wives Are Sad as Husbands Sail

We streamed out from the great church, with its decorations of ropes and anchors to mark the ties between Portugal and the sea, and hurried down to the water front and aboard.

The last of the dorymen's wives were being rowed ashore in the little red dories, and the children with them were quiet and sad. The dorymen, I learned, went year after year with the same ships, and some of the privileged among them were allowed to have their wives and children aboard with them for the last few days before departure.

* See "The Pathfinder of the East," by J. R. Hildebrand, National Geographic Magazine, November, 1927.

Gleaming in New Paint, Fishing Schooners Wait at Anchor in Oporto, Portugal . . .

Early in April the 32 sailing vessels of the Portuguese cod fleet cross the Atlantic to the Grand Banks of Newfoundland and the Greenland coast. The fishermen, as they have for centuries, work in frail one-man dories launched each morning and picked up at night. In autumn, when the ships head for home, they will be battered but loaded with hundreds of tons of cod; the stormy Atlantic will claim some stalwart dorymen.

It was these wives I now saw coming across the swift blue water. They were dressed in the costumes of the fishing hamlets of Portugal. There was one from the north, in voluminous colorful skirts; others, from the southern Algarve, wore somber black, with high black-felt hats atop their heads.

Aboard the *Argus* all was activity. Throaty calls of the dorymen sailors mingled now with the clank of the windlass bringing the cables home and the creak of blocks as high white sails piled aloft.

Three other schooners were sailing with us, for the bankers like to go in company. This has been traditional since the days when pirates roamed the North Atlantic, but it has still another purpose: In early spring when the ships sail, and in autumn when they return, sudden gales blow up and old ships may founder. If there are others near by, they can rescue the crew.

The *Rancho:* Big Bunks and Big Men

We swung slowly under the Lisbon hills and looked back upon the white city for the last time in many months. As the schooner crossed the Tagus bar and passed out to sea, gulls cried around her, the wind began to sigh in

167

. . . to Start Their 5,000-Mile Voyage

A few days before sailing, a workman finishes painting the hull of the *Pegar de Brandão*, a 187-ton three-master without auxiliary power. In the fall of 1951, filled with cod, she went down in a hurricane.

the rigging, and the white water gurgled and splashed at the curved bow.*

Down below in the *rancho*, as the forecastle of a Portuguese banker is always called, half the complement of dorymen were settling in. The other half would be shipped in the Azores, for the *Argus* was bound first for Ponta Delgada on São Miguel Island. The rancho was a cavernous place full of big men, big bunks, and all kinds of cooking, fishing, and seafaring gear.

On the side of his bunk, holding a mug of wine in one hand and a slice of crisp bread in the other, sat Antonio Rodrigues, 63 years old (page 585). Antonio, I learned, was making his forty-third voyage to the Banks for cod. He was a handsome old man with a face gnarled and brown, but his body was still as spry and agile as a youth's. I had seen his wife go over the side with the others. There was still a faraway look in his eyes.

"How does it feel to be making your forty-third trip back to the Banks?" I asked.

"I wouldn't be any place else, and there isn't a better ship," Antonio grinned, taking a swallow of purple wine. "It's a good life for a man."

"How long have you been with the *Argus*?"

"Ever since she was built," the old man said. And that went for almost all her dorymen, except the very young ones. Most were middle-aged.

The Man Who Hooked a Ton a Day

A little later I noticed a gaunt, determined-looking man with a striking face taking his turn at the wheel. The mate—a cheerful youth aged about 22, making his fifth voyage—told me that this was the First Fisher, Francisco Emilio Baitista, champion doryman of the whole fleet. He caught a ton of cod a day. A ton a day! I looked at him with astonishment, for I'd no idea that fish could be caught in such bulk by hook and line.

Francisco's shipmates had a joke about his fishing prowess. "He has a hatchery of his own," the second mate explained. "He has his own cod and he just goes and takes them."

Captain Adolfo, the master of the *Argus*, was standing by the wheel. He was a lithe, dark man, about 50 years of age. I knew he had been at sea in sailing ships since he was eight years old. He still had his shore clothes on, a smart business suit and a soft felt hat, with brightly polished shoes. On his right hand sparkled a diamond ring. He had joined the ship at the last moment, coming aboard with the clearance papers.

His wife and family were at Ilhavo, the famed village of shipmasters and cod hunters which stands on an arm of the sea south of Aveiro in the north of Portugal. From it hail most of the schooner masters. But though Captain Adolfo had been going out from Ilhavo for more than 40 years, he was not fond of a fisherman's life.

"The Captain," said the mate, "he hates the sea. But he will fill his ship with codfish. You see."

I looked forward to seeing.

And now the good *Argus* headed out toward the Azores, and the dorymen began to get

* Sailing with the Portuguese Grand Banks fleet is the most recent of Alan Villiers's many sea adventures. Others described in the NATIONAL GEOGRAPHIC MAGAZINE include: "Sailing with Sindbad's Sons," November, 1948; "Last of the Cape Horners," May, 1948; "North About," February, 1937; and "Rounding the Horn in a Windjammer," February, 1931.

A Jigger Hooked This Handsome Greenland Cod Through the Lower Jaw

While a doryman waits for cod to go after the bait on his long-line, he fishes with one or more hand lines called jiggers. These are elongated pieces of lead which look (to the cod, at least) like herring. The fish does not swallow the hook, but goes after the lead and is hooked from below when the doryman jerks his line.

their dories and their fishing gear ready (pages 578, 579). At Ponta Delgada we picked up another 26 dorymen, giving us a complement of 55 in all. With the deckboys and the cooks, officers, engineers, and so on, the schooner had 70 souls aboard. Her decks were crowded with the little red dories carried in stacks six and seven high, fitted together like a child's hollow blocks and lashed to the decks.

Mystery of the Vanishing Bait

Down for'ard near the rancho she had a big refrigerated room for bait, but there were no bait fish in there yet. For some mysterious reason, the sardines which were used for bait had temporarily deserted the coasts of Portugal.

And so from the Azores we made toward St. John's in Newfoundland, to ship our bait (map, opposite). You couldn't hook a codfish without bait.

The longer I was aboard the *Argus* the more I marveled at her. She was a sailing ship, but she was fitted with every modern device that was of use. The Portuguese are not old-fashioned; they stick to the schooner rig because it is ideal for fishing on the Banks, where a ship has to keep the sea over many weary months and a powered vessel might run out of fuel.

They had given the *Argus* all the up-to-date equipment she needed. There was that big refrigerated room, for instance, holding 30 tons; a radiotelephone, and an electronic device for accurately measuring the depth of the sea.

She was fitted with steam heat, too, for the Greenland grounds. Her steel masts were hollow to act as exhausts for the boilers and for the big Diesel engine down below. She was a fine, modern ship, and I had no trouble settling down in her with the good Portuguese.

Then we got to St. John's and there was still no bait, for it was a bad ice season and the Newfoundlanders could not get at the herring. It was early April, and cold. We passed 17 days in the harbor, just waiting.

The dorymen got their long-lines all ready; they rigged their dories and washed their clothes in the clear mountain streams, bang-

A National Geographic Map

From Warm Portugal to Arctic Greenland, Dorymen Sail in Quest of Cod

In past centuries, dorymen did most of their fishing on the Grand Banks. Since the turn of the century, however, the Arctic has grown warmer and the cod, a cold-water fish, has moved north. Portuguese captains now sail as far north as Holsteinsborg, where 50 years ago cod were virtually unknown (page 584).

ing them on the rocks as they were accustomed to do at home. After that there was nothing to do—nothing but stare into the shops or play with the St. John's kids.

Most irksome to the idle fishermen was that they were unable to earn a thing. Payment for dorymen is by results—no fishing means no pay, and of course it delays the voyage and puts off home-coming. Nearly all the dorymen are family men, and they love their children and their homes. We were glad when at last the herring ran and we got our long-awaited bait.

Over at Four, Fog or Fine

Then we fished for cod on the Grand Banks off Newfoundland for six cold and foggy weeks, while we waited for the summer sun to melt the ice in Davis Strait and clear the way to Greenland. But there wasn't any sun and there wasn't any summer, either. What a place!

The *Argus* and her consorts just anchored on the Banks, choosing a place where the rocky bottom prevented the horde of trawlers from working because the rocks would rip their costly trawls. Her 53 dorymen went over the side at 4 o'clock every morning they possibly could, fog or fine—and it was rarely fine (page 587). They'd streak away under their tiny oiled sails for the horizon, lay their long-lines, and fish all day (pages 588-9). While the 600-hook long-lines were down, they'd fish by hand with lead jiggers, shaped like a herring and fitted with two large hooks (opposite page).

I went out with the dories. Until now, I had thought I was reasonably accustomed to the sea and more or less inured to its hardships. But in a dory I found I was a greenhorn. The rigors of sailing great windjammers round Cape Horn are nothing to the sort of thing a doryman on the Grand Banks takes in his stride.

Take a look at a dory first. It's nothing but a frail-looking open boat, flat-bottomed, built up of a few planks. It has no keel, nor even a rudder. Its thwarts rig down so it can be nested. It's about 14 feet long, less than 6 wide. Its little mast is a piece of sapling that

Lisbon's Sailors Have Roamed the Seas for Five Centuries

Lisbon, a thriving city of 800,000, is Portugal's capital and busiest port. From its five-mile water front (see map) the city climbs steep hills; elevators and funiculars help pedestrians. At near-by Belem, where Vasco da Gama in 1497 began his famous voyage around Africa, most of the cod ships gather for a blessing before starting for the fishing grounds.

Pan American World Airways

Deck Boys Hold Dories Alongside the Schooner *Argus* with Long Poles While Dorymen Pitch Cod onto the Deck with Pronged Gaffs

As soon as a dory is unloaded, it heads back to sea for more. At nightfall dories are hoisted on board, and all hands set to work cleaning fish. As each boat arrives, Captain Adolfo (second from right, at rail, with dark cap and beard) writes down an estimate of its load. Dorymen are paid according to how much cod they bring in

the doryman cuts for himself; its rigging is homemade, and its sails likewise (page 591). It looks all right for a quiet day on the Potomac. But there are few quiet days in spring on the Grand Banks, and fewer off Greenland.

My dory was yanked to the side of the rolling ship by a couple of patent tackles and two iron hooks. I looked overside at the cold, cruel sea and thought, "I'd rather stay in the *Argus*—she's small enough." But the 53 dorymen were looking on from the turbulent gray waters, and I had to go. My dory was full of lines and gear and bait, with a small-boat compass atop the lot in case of fog.

"Go off along a bearing," old Antonio Rodrigues had said. "You never know when there'll be fog around here. And don't worry about the dory. Dories are all right. It's the men in them . . ."

I remembered old Antonio's advice.

"And get away from the ship's side quick," he'd said. "That's the dangerous place! You can be stove in against the steel plates if you don't watch out."

The iron hooks yanked my dory to the rail. The white schooner rolled alee. A nasty, gurgling sea rose until it lapped hungrily at the bottom of the little boat.

"Now!" yelled the cook and the second engineer, at the tackles, and let me go. With a swoosh and a smack upon the sea, I was off. I shoved her away from that murderous steel side as fast as I could.

How enormous the *Argus* looked, seen from down there on the surface of the waters! She was only a 696-ton schooner, but just then she looked like a 20,000-tonner to me. At once my dory began to toss and leap and fret upon the ill-tempered sea running on the Banks, and I got my little mast and sails up as lively as I could.

Once the sails were on her, I was astonished at how well that little dory sailed. She was lively, certainly—almost enough to make me seasick—but she got along very well.

Problem: Find the Cod

At once the sea seemed the loneliest place I had ever known. I had always been used to staying aboard any ship I sailed in, from beginning to the end of the voyage. You don't normally go over the side at sea if you can help it. From this tiny boat I felt for the first time the vast immensity and the incalculable challenge of the great open ocean.

It was savagely cold. I didn't see how I was going to work with my bare hands, though I had a 300-hook line to pay out when I reached a good place. A good place? How was I to know the difference?

I made in the general direction I had seen our champion fisher go, and reckoned to sail until I saw his dory. All the dories had big white numbers on either bow. His was No. 16. I sailed and sailed, and not a sign of No. 16 did I see. When the hull of the *Argus* was almost below the horizon, I thought I had gone far enough.

So I lowered my sail, threw out the little grapnel, baited up the last hooks of the long-line (there had not been time to do the lot before leaving the ship), and got the line well laid on the bottom, across the current. There were about 35 fathoms (210 feet) of water.

Next thing I began to fish with the jiggers. To work these, you take one jig-line in each hand, drop the jigger until it is just off the bottom, and then alternately jerk it smartly up and let it drop back again. It is supposed to hook the cod on the upward swing.

Mine didn't. Maybe they weren't on the bottom. How could you tell, all that way down? A doryman obviously had to have his brains in his finger tips, and mine were numb and particularly brainless that morning. The dory hopped and jumped, and you had to stand up in it to jig (page 582). I sat down. I hauled in one jig-line, stuck to the other. The long-line must be down three or four hours before it can be hauled.

Half a Load in One Haul

The dory continued to jump and leap, and there was no true rhythm in the water. The wind began to sigh, and there was an ominous bank of nasty fog to windward. Here and there, as my dory rose on the crest of a sea, I could see other dories—never more than five or six, though I knew there must be more than 300 all around me, for there were several big schooners near by.

I began to think that down here on the sea a lost dory would be mighty hard to find. And dories, I knew, were lost often enough.

Toward 9 a.m. I began to haul in my long-line. That took me two hours, for I had no skill at the business. Again you have to work, and again the dory bucks and jumps and tries to throw you.

But, by the luck of beginners, I had a fair enough haul. My long-line, like all the others, consisted of several 100-yard lengths of big cod line spliced together. To this, small pieces of lighter line, called snoods, were attached about a fathom apart. The snoods held the hooks, 50 of them for each 100 yards of cod line.

Most dorymen used long-lines made up of from eight to twelve of these 50-hook sections, so that they were fishing with 400 to 600 hooks. But I was trying a 300-hooker for a start. That was business enough! Handling the long-line so as not to get the hooks snarled

Grand Banks Schooners Head Out from Lisbon on a Spring East Wind

The author shipped in the 696-ton Portuguese fishing schooner *Argus;* her sister ship, *Creoula,* sails off the starboard bow. Portugal and home grow misty in the distance.

With a Catch on the Way, Crewmen Stow *Gonçalo Pacheco*'s Foresail. She Is the Last Scoutmaster in Portugal's Fleet

[illegible]

A Grumman's Crew Grinned Real and Rugging as They Shout Goodbye to Friends on Argus. Here in the Azores the Ships Packed Company

^ Bound for the Banks, Dorsman Keep Boat Repairing Gear

< A Dorsman's Long-Line Can Catch 1,000 Fish

As Jaws Nears the Fishing Grounds, Men Crowd the Deck in a Rush to Get Gear Ready

Laundry and Oilskins Flap in the Sea Breeze While Argos Lies in Harbor

At St. John's, Newfoundland, the crew [illegible]

is a skilled job, and I was far from skilled [illegible] untangle them, and that took time.

But the cod is a stupid and docile fish. Those on the hooks waited patiently until I hauled them up, even the 80-pounders. Some had only a piece of the hook through their silly rubbery lips, but still they hung there, waiting their turn to be pushed into the dory.

One or two did slip off as I got them to the surface. Then I reached over with a light sort of gaff, a piece of wood with a large hook attached, got them by their gills, and flung them into the stern sheets without further ceremony.

If one had to a much life, I stunned it with the other end of this small gaff. But most of them just flopped a bit and then lay still in the heap.

As any fisherman might have been, I was excited at first by the size of my haul—almost 50 fish. But I soon got over that. Cod are just too sluggish to provide much excitement.

Most of those I caught weighed, at a guess, 30 to 45 pounds. When I got them all in, my dory was about half full. Only a few were little 20-pounders—and that is one reason why the Portuguese still prefer the schooner to the dory fishing. You get bigger and better fish with hooks. The trawlers, using nets, have to go far, often over the same ground where the bottom is good, but the dories can go anywhere.

After the Fish Comes the Fog

I didn't pay the line out again. Ordinarily a dryman would stay out until his dory was full, or the recall flag—any big flag on the aftermast—was hoisted. But I was not a dryman, and now I knew I never would be. I was just trying it out, and I was mighty glad to call it tried and get on my way back to the ship.

But that infernal fog *had* blown down. An arm of it was between me and the *Negus*. Suddenly I found myself alone on the sea, and the ghostly arms of the horrible fog were wraithlike around me! Well, I could anchor and wait. Antonio Rodrigues had said to do that.

"Don't ever panic," he had said. "The panicked are dead."

But the fog didn't look like the really determined kind. Now and then I could see the gray sky above; sometimes there were lesser clearings. I hoisted the little mainsail and the minute jib, for there was a gentle sailing breeze upon the water. I had my bearings, and I put the boat compass on the thwart before me.

With one of the dory's three small oars down to leeward as leeboard and rudder, I made grimly off along the bearing that I'd had of the ship, and kept a smart lookout for other dories. I had a conch shell to blow, I also had a loaf of bread, and water enough for a couple of days if used sparingly.

When you go off in a dory, you expect to come back the same day. Dorymen never prepare themselves or their boats against calamity. If it comes, they take it in stride.

A Fog Siren—Which Way?

After a while I heard a schooner sounding her great fog siren, for they all carried similar sirens at their masthead—a summons to the dorymen in fog. But where was this schooner? Was she the *Negus*? I didn't know. I had no judgment of sound direction in fog.

I knew the distinctive signal the *Negus* used on her fog bell, the big old church bell which hung in the mizzen rigging. I blew this signal on my conch shell and waited for a reply.

None came. Then that siren wasn't aboard the *Negus*, or I'd heard it through some freak condition in the fog. I carried on. I blew my conch again.

What was that? An echo? I blew again. It was no echo! It was a dryman sounding our signal, an *Negus* man, in the fog like myself. I shouted to catch his attention, to check my compass course with his. He shouted back. I saw nothing but the white and ghastly fog and the greasy coal swirling of the wretched sea.

And then, indistinct at first and almost unbelievable, I saw the triangle of a dory sail harden in the surrounding murk; a roll of white water gurgled at the little lateen bow. There was a dory! No. 14! Battista, the First Fisher—I couldn't strike a better man than that. He grinned.

"No good! No good!" he shouted. But he looked abominably cheerful, and I could see that his dory was full to the gunwale with fine big cod.

Once I had found the First Fisher, I knew I was all right. After a quarter of an hour of gliding through the pall of fog, a white monstrosity suddenly loomed above us, right alongside. It looked like an iceberg.

"*Negus*," Battista grinned. "We come back, no?"

Aye, we came back, and I had had enough of dory fishing for the day—and for all time, as far as that went.

And yet that evening down in the mess hut I found all hands cheerful enough. Nobody was lost. They were all expert fog navigators with an uncanny ability to find their way back to the schooner.

I knew well enough that being lost in fog was only one of the risks these brave, quiet men took as part of the daily job. Being

Standing All Alone in His Dory, a Fisherman Brings Another Cod Up from the Bottom of Davis Strait with a Jigger

[illegible]

An Overloaded Dory in Choppy Sea—and a Fisherman Takes an Unwanted Swim. Ready Hands Help with Salvage

blown away in storms, knocked down by slips, or overwhelmed in a rising sea—even being [illegible] —those were dangers they had to accept as routine. The doryman's was no life for the timid or the stay-at-home.

Down in the ranche was a young Azorean dryman named Francisco de Sousa Damaso, on his first Banks voyage. One day he was knocked down by a whale. Not that the whale meant any harm. It just happened to come up to blow right underneath part of his dory, and [illegible] slowly up, and the doryman and the fish and all the other contents tipped slowly out. Then the whale backed away, no doubt mildly astonished at the damage he had caused.

It might have been Senhor Damaso's first Banks voyage, but it was not the first time he had seen a whale. He shooed the beast off, righted his dory (which had not gone [illegible] and [illegible] Then he retrieved all his gear that he could find, [illegible] and [illegible] with his fishing.

They are a taciturn lot, those dorymen, and they had all been in some sort of fishing since they could walk. I loved to listen to their yarns, especially those of the old-timers.

They told tales of the really tough times on the Banks, when hundreds of little two-masters used to come from Portugal, Spain, and France, and from Gloucester, Massachu- [illegible] out of Gloucester), and there was no refrigeration, no power, no radiotelephony. Sometimes they would lose three or four schooners together in a sudden gale, and all their dorymen with them; once on a single stormy night they lost 200 dorymen.

But now—why, said old Antonio Rodrigues, it was almost a schoolgirl's life!

Free Trip to China

I doubted that. I knew that Antonio himself had once been lost in fog for days—he didn't know how many days—and had been picked up by a wandering windjammer bound out of Boston for the China coast. Antonio had to go to China with her. Some years passed before he got back to the Algarve again, where they'd long mourned him as dead.

Now old Antonio laughed about what he called his "free trip to China." He was a tough old bird, and a true dorvman.

Steadily the First Fisher went on catching his ton of cod a day. He was a skillful and indefatigable fisherman. More than that, he was the sort of man who would have excelled at almost any work. He was born to fishing, from the lovely Algarve port of Fuzeta, and so at fishing he excelled (page 591).

There were others able to keep up with the First Fisher for a while—João de Oliveira, the Second Fisher (page 596); Francisco Martins from the Azores, and Cesar de Medeiros, who looked like a pirate. But none could keep on for long at the same rate.

Sometimes impossible weather kept the dories nested, for it was no use to send them out if they tossed about too much for the men to fish or if the sea was so high they couldn't be loaded. A dory had to bring back a fair load of fish for the doryman to make a living. In bad weather they fretted, all of them.

When we'd used up the St. John's bait, we went into North Sydney, Nova Scotia, for more herring and fresh mackerel to take along to the Greenland grounds. At North Sydney there were 10 schooners and a couple of dory-carrying motor ships.

Our dorymen were given $5 or $10 apiece for spending money. I saw them all buying things for children and grandchildren, nothing for themselves.

North to Greenland

As soon as the bait was aboard, off we went again, north through the Strait of Belle Isle toward Greenland.

There were big bergs in the strait, and the Labrador Current was still full of ice. We were caught badly in one ice field in a fog and for a day and night had to stop and push the floes away. Even a small floe can smash the plates of a steel ship.

We were lucky. The ice didn't break out hull or that of the ships with us, our sister schooner *Crusader*, the four-master *Avis*, the little motor ship *Elizabeth* (page 586). A storm blew the fog away, and we sailed on toward the banks of Fylkas and Little and Great Hellefiske, in Davis Strait (map, page 569).

For the past twenty-five years there has been what scientists call a "warm cycle" up in Greenland, and the cod have been able to migrate farther north. Where the cod went, so did the schooners and the dorymen. For the next three months the *Argus* and her consorts fished the ice-littered, treacherous waters of the banks near the Arctic Circle in Davis Strait. Some years a few vessels go even farther north.

The method of fishing was the same as on the Grand Banks, except that even longer lines were used. Add the grim, jagged coastline of Greenland, throw in a background of [illegible] and [illegible] sudden, furious storms and strong, swift tides, and you have the Greenland fishing grounds.

There was continuous daylight from the midnight sun for the first two and a half months. The dorymen worked and worked,

Antonio Rodriguez Takes Up Wheel on His Forty-third Trip to the Banks for Cod

[illegible] cave when Banks ships [illegible]

Painted Sails Dry on Dories Nested Aboard *Elizabeth*, One of the Banks Fleet's New Motor Ships at St. John's, Newfoundland

[illegible]

In Davis Strait: Sails Stowed During Ice Cod. Oars Double as Rudders

[illegible]

Unless the Schooner Signals Them Back, Divers Won't Return Until Tuns Are Filled

[illegible]

After They've Caught, Cod Must Be Cleaned, Salted, and Delivered

Portugal's Champion Tuner Passes a Big One Over the Side

[illegible]

Cod, Gear, and Rigging Crowd Every Inch of a Dory

[illegible]

Dories Get a Final Scrubbing as *Argus* Heads South with a Full Load of Cod

[illegible] September [illegible] Atlantic [illegible] These men [illegible] the dories for [illegible] will be [illegible] in a few [illegible]

often putting in a 20-hour day, fishing from 4 a.m. and cleaning and salting until midnight (page 590).

The salted fish were stowed below in the cavernous hold. Until it was filled, we would not head for home; if the fall gales and new ice drove us from Greenland, we would go back to the Grand Banks again.

The spiteful winds from the Greenland hills are savagely cold. We lay at anchor in the open sea, for we could not fish in Greenland's territorial waters. The dorymen suffered torures in the freezing air. Their faces cracked, their hands opened up, their oilskins chafed their wrists. But they were unhappy only when foul weather caused delays and they could not safely launch their dories.

Fog Traps a Doryman

Here too there was fog, heavy, cold, and blinding. One time doryman Antonio Rodrigues Chalão, a skilled man from near Oporto (Porto) who worked in winter as a lifeboatman by the Douro bar, was adrift five days, and we had almost given him up. He vanished in the fog and then there was a gale.

The gale blew three days, and then more fog came. But on the fifth day after he had gone the weather cleared and Antonio Rodrigues Chalão came back! He came back smiling, but he had to be hoisted inboard with his dory, for he was all but worn out. Yet he was fishing again later that day.

I talked to him about his experience. What had he thought, down there in the frail dory?

"I prayed," he said. "I did what I could, and then I prayed, and I thought of my wife and seven children back in Portugal. The compass was out; that's why the fog got me. Then in the storm I anchored and rode to the wind, using my oars to keep the dory safe.

"And I often had to bail for my life, for the heavy sprays broke aboard. I was afraid my anchor would carry away, for my anchor line was only a piece of rope, and I would be drifted off the banks and out into the open strait. Then I knew I'd be finished."

"But it didn't carry away?"

No. But I had to row plenty, to keep the dory head to sea. I made a bit of a shelter with the soil. I ate the raw cod, and I drank the fog moisture wrung out of my woolen cap."

That was all I ever got out of Antonio Rodrigues Chalão, after he had rowed for five days against a gale to keep a 14-foot boat head to sea beyond the Arctic Circle. The skin on his palms was chafed almost through. But he was lucky to be alive, and he knew it. The little cemetery at Holsteinsborg in Greenland has many graves in which lie drowned dorymen.

One night 15 dorymen were adrift from the schooner *Maria das Flores*, a three-master from Aveiro. When fog came down and the dorymen did not come back, all the captains kept watch and communicated with each other by radiotelephone, and the anxiety in their voices was sometimes painful to hear.

These captains carry a terrible responsibility, for it is their job to decide whether it is safe to launch the dories or not. Powerful winds funnel up and down Davis Strait bringing sudden, dangerous seas on the fishing banks. Yet if the dories were kept nested whenever the weather threatened, then no ship would ever fish full and no doryman would make a living. The captains *have* to risk their men.

The whole fleet heaved a great sigh of relief the following morning when they learned that the *Maria das Flores's* dorymen were safe.

They had run into a Greenland fjord and sheltered under an upturned dory, and had come back to their schooner in the morning when it was bright and clear. They had not forgotten to clean their fish when they landed, and a party of coastal Greenlanders had helped them. The Greenlanders even trimmed their whiskers and hair, so they came back much improved in appearance.

By the middle of September our *Argus* had a tolerable cargo. She'd taken enough cod to be filled many times over, but the cod kept shrinking every day and the salt formed a brine which was pumped out twice daily. The rolling of the schooner helped to pack the cargo tighter, and again and again the big fish hold was filled to the deckhead in most of its compartments, only to require filling once more.

"There is always room to stow another cod," said [illegible] was [illegible] miserable. He hated to leave the grounds while there was room to put another cod aboard. The official capacity of the ship was listed as about 12,000 quintals (a Portuguese quintal is almost 130 pounds of dried fish), and she had that much aboard by the end of August.

Race Against Time and Weather

Still we fished steadily on, though the snow squalls were back and the nights were growing, and the weather grew steadily worse. The old dorymen patched their faces with tar to fill up the cracks. Their hands they had long since given up. "The good weather will heal 'em," said old Antonio. "We get the winter at home," said the First Fisher.

I began to fear we might have the winter there off Greenland. Already the long green grass was growing on the schooner's sides. Her hull was chafed all along from the fury launchings and the bumping of the dories

Snowed In? This Is No Arctic Blizzard, but Safety for Preserving Cod

[illegible]

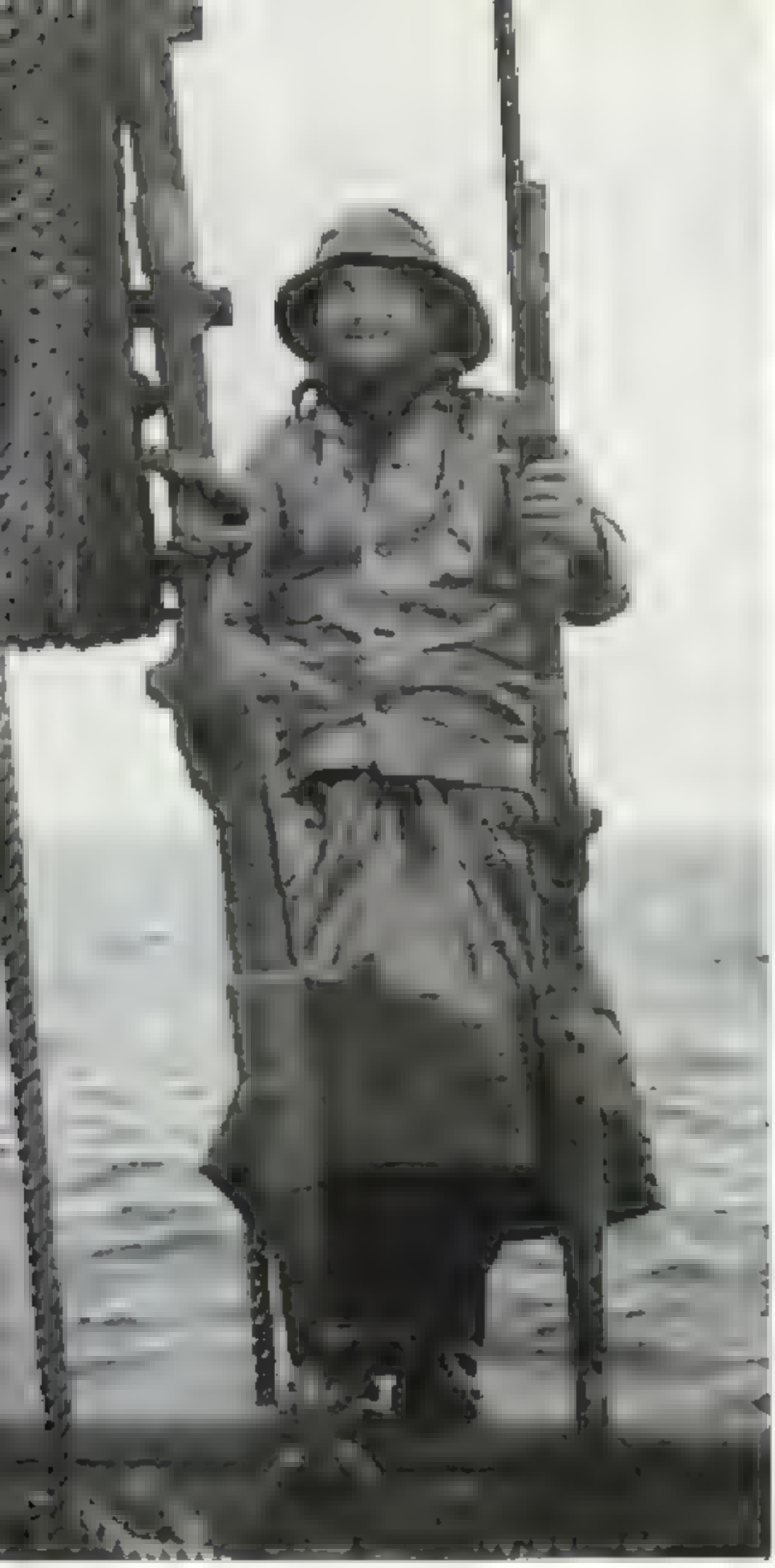
[illegible] Adolfo was [illegible] Not would be [illegible].

At Last, Enough Cod!

[illegible] Adolfo thought that we [illegible] enough, [illegible] you! [illegible]

Bad weather Dark Storm : Setting Up a Boom Tackle as an Approach Storm Blows In

[illegible]



Doryman's Grin Marks a Good Day and a Boatload of Fine Fat Cod

[illegible]

was [illegible] room for the [illegible] cod. But every tank was full of cod-liver oil, every barrel on deck full of [illegible] tongues and [illegible] and other [illegible] parts, and the hold [illegible] was mighty near to full. Where the [illegible] lies nobody knew, for it was [illegible] under the long dank grass.

For a hundred days we had eaten cod and daily supped of the midnight soup of codfish [illegible]. The dorymen call it the "soup of sorrow," for they say that, once having eaten it, you are bound [illegible] to the Banks again. One hundred days of the soup of sorrow were days enough for me.

Finally our captain weighed anchor. At first the dorymen dared not believe that he was really going home. They feared that, if the weather eased, we would anchor again on one of the southern banks [illegible] cod yet again into that cavernous hold. [illegible] cod? There was no such [illegible]!

But the north gale blew and we raced over [illegible] [illegible] [illegible] with the [illegible] [illegible] [illegible] and the [illegible] [illegible] [illegible].

Yet it was not until we had sailed past the [illegible] of Sable and past the [illegible] Bank that the dorymen dared smile. [illegible] was the last large bank. The course now was southeast toward the Azores—the Azores, and sunshine, and good Portugal!

A hurricane or two smashed up from the Gulf Stream [illegible] (page 395). The little [illegible] [illegible]. She was [illegible]. The schooner [illegible] [illegible] ple with their own [illegible], for a [illegible] has a lifeboat for every [illegible]. [illegible] his life. [illegible] won't save him, nothing will.

Back Home to the Sunshine

The great seas leapt at us, too, and smashed along the decks, but the *Argus* was a stout [illegible] ship and [illegible] sailor. We had to heave to while our radio crackled with stories of [illegible] and [illegible] with [illegible] washed overboard, dorymen [illegible] [illegible] smashed.

Our two dorymen on watch were [illegible] together by the wheel to keep them from going over the side. The North Atlantic in September and early October is a wild, bad ocean.

On a sunny morning we [illegible] at lovely Ponta Delgada, and our Azorean dorymen landed there, full of smiles. We sailed on the moonlit evening for the last [illegible] home. I left the [illegible] *Argus* [illegible] still a picture of romance and adventure, in an arm of the [illegible].

I looked back at her while [illegible] [illegible] the [illegible] sailing vessels and motor [illegible] of the [illegible] fleet which left [illegible] returned. Some [illegible] dorymen remained to sleep [illegible] beneath the gray-cold sea or under the [illegible] of [illegible] [illegible].

It was a great adventure that I shared with them, and I learned to regard the Portuguese as Captains Courageous indeed.*

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* For a [illegible] account of [illegible] [illegible] the Portuguese [illegible] [illegible] *The Quest of the Schooner Argus* (Charles [illegible], New York, [illegible]).

The Making of a West Pointer

This Year the United States Military Academy Marks a Century and a Half of Training Men for Leadership

By Howell Walker

EARLY last July I went to West Point to see 642 young men begin a new way of life. The big day had come for these future officers entering the United States Military Academy.

Some arrived by rail, air, bus, or family car; others by bicycle or on foot. To the Point overlooking the Hudson River fifty miles north of New York City, they came from every walk of life, from every State, even from foreign lands.

At West Point's station I watched a hundred of them pile off a train like any mob of college freshmen. Mostly coatless, hatless, and swinging light luggage, they lined up raggedly at an officer's command and heard their first orders.

The candidates marched up the hill toward the towering gray halls. A loud "Halt!" stopped the group, frozen in uncertain traces. An imperious news photographer flashed his camera, then with the same confidence called "Forward march!" Everybody laughed, but not for long.

There's nothing funny about facing plebe, or freshman, year, by far the hardest of the four-year course. Rigid educational and physical tests make it tough enough to enter the Academy; exacting standards allow no cadet to let up; and, once commissioned as an officer, he must never forget his responsibility as an exemplary leader of men.

"Get Those Shoulders Back, Mister!"

A blazing hot sun beat down on the green cadets moving up the road. Finally they filed through a Gothic sally port into Central Area, a large quadrangle formed by gray stone buildings (page 613). Here they were assigned to quarters, two or three men to a room in their new home, "beast barracks."

Now the new plebe feels the initial impact of things to come. After the first five minutes any similarity between him and a civilian college freshman meets sudden death. Seasoned upperclassmen start shouting, "Get those shoulders back! Head up! Chin in!"

Under these relentless drillmasters the plebe learns fast that the first principle of discipline is subordination. He addresses his cadet instructors always with "Sir"; impersonally, they call him "Mister" (page 608).

As long ago as 1823 a brand-new cadet wrote to his father: "The first day after my arrival I was taken out to drill & sure you never saw a more awkward creature in your life than I was or appeared to be . . . To display the Chest, draw in the Corporation, draw the Chin in perpendicular to the Chest, hold the hands down so as to touch the seams of the Pantaloons, & take care dont bend the elbows, keep the Shoulders drawn back & always be sure to keep the feet in an angle of 45° etc., etc. Indeed I had so many things to learn that I almost despaired of ever being a soldier."

The plebe thrives, resigns, fails, or is fired; he never "fades away." Because of its ultimate purpose, West Point keeps only those who can take it; so a constant weeding-out process goes on.

Poet Edgar Allan Poe and artist James Abbott McNeill Whistler, one-time cadets, both fell by the wayside. During his brief stay in 1830-31, Poe chided science—"Why preyest thou upon the poet's heart, Vulture. . . ." Whistler, ex-1855, later explained, "Had silicon been a gas, I would have been a major general."

"Will I Make the Grade?"

In a matter of hours after their arrival, the new cadets all began to look alike to me. Uniformed, barbered, and drilled in the preliminary steps of basic training, they already marched as one. On their faces I imagined I could read a common concern: "Will I make the grade?"

Even in ready-made uniforms issued the first day, the plebes seemed spruce; but in two months or so the West Point tailor shop would have finished the custom jobs which fit cadets like their skins.

Tailoring for young men whose weights vary with seasons calls for long experience with West Point's climate, routine, and cadet digestion. Recently, two brothers completed a total of 103 years of clothing "the long gray line." Of the shop's present 67 workers, 14 have served more than a quarter-century.

In 1840 a cadet named Ulysses S. Grant wrote home that his pants clung to him like bark to a tree; he could bend over or run only with fearful results. According to legend, once when the uniform order called for cross belts, Edgar Allan Poe, taking it literally, appeared at full-dress parade stark naked except for the specified item.

How does a candidate get into West Point? Well, to begin with, he must be unmarried

From Fire Platform 1, by Parapet, Cadets Map West Point's Hills Panorama

Someday These Cadets May Wear Stars Like the Academy Superintendent's

[illegible]

[illegible] between the ranks of 17 and 22 years. Boys come to play games on [illegible]

[illegible] for boys [illegible] Members of Congress, the Vice President, [illegible] pass entrance examinations. The President has [illegible] of regular service and [illegible] from other regular or reserve Army or Air Force units across. In these [illegible] Presidents nominations [illegible] competition.

Most [illegible] are sons of [illegible] the Regular and Reserve Corps. For some [illegible] Congressional Medal of Honor winners and [illegible] understanding [illegible] of [illegible] and naval [illegible]

[illegible] of the Low Countries, Latin America and [illegible] Since [illegible] Congress.

The enlistment [illegible] the Academy [illegible] 2,500 [illegible] disciplines, courses and [illegible] regulations. [illegible] large group 75 [illegible] Many more [illegible] for [illegible] Academy. About one [illegible] of a class [illegible] to graduate [illegible] or another.

Plebes Swarm In at Trophy Point

[illegible] 455 [illegible] with [illegible] Trophy Point [illegible] the [illegible] spot in the [illegible] monument to [illegible] the Revolutionary War [illegible] World War [illegible]

descent call it a "Yankee tribute to southern marksmanship" (pages 620-621).

Facing this memorial, the plebes raised right hands and said together:

"I do solemnly swear that I will support the Constitution of the United States, and bear true allegiance to the National Government; . . . that I will at all times obey the legal orders of my superior officers, and the rules and articles governing the Armies of the United States."

With this swearing-in ceremony the candidates officially became members of the United States Corps of Cadets. Then, at an order, the formation stood at ease to hear a straightforward address by the Commandant of Cadets, Col. John K. Waters.

"In you and your careers," said the colonel, "here and after graduation, lie the hopes and fears of your families, your friends, the communities whence you came, and our Nation . . .

"Cherish the honor system . . ." he continued. "In its written or spoken form it is simply: 'Cadets do not lie, steal, or cheat . . .'

"You have accepted a challenge for which you are ably fitted. In complete faith you are turning yourselves over to West Point to receive the training which has stood the test of time, not only through peace but also war, for 149 years . . . We believe in your sincerity of purpose, and we will do all in our power to develop in you a high sense of duty, an unquestionable sense of honor, and a devotion to our country."

How carefully West Point guards this code became evident last year with the mass dismissal of 90 cadets involved in cheating on daily quizzes and reviews. For its success the Academy's honor system depends more upon the men themselves than upon the supervision of the officers; every man is honor-bound to report any breach of it committed by himself or by others to his knowledge.

To the Corps the system means something much bigger than an individual, group, or personal friendship.

Not Again for a Million Dollars

For the next eight weeks the class undergoes intensive and tough basic military training, not unlike that given any new Army recruit fresh from civilian life.

At the same time plebes learn the customs and courtesies of the service and improve their physical condition in an extensive sports program.

The new man sums up his first two months at West Point with a sentence he will repeat four years later: "I wouldn't do it again for a million dollars, but I wouldn't take a million dollars for having done it."

Meanwhile, what are the other classes doing? Each of the three enjoys a month's vacation sometime during the summer. First classmen (seniors) take a two-week plane trip, visiting selected U. S. Army and Air Force posts for advanced instruction; then they help train the lower classes.

Second classmen (juniors) receive a three-week indoctrination course in the Air Force, one week of airborne training, and two of amphibious operations.

In early July, last year's plebes (now third classmen) enter the reservation's training quarters at Camp Buckner beside Popolopen Lake. In two busy months they get a practical taste of virtually every branch of the Army, winding up with mock combat (pages 607 and 615).

By September the entire Corps has assembled at West Point for the academic year. Classes, drills, and athletics begin in earnest for all.

An Average Cadet's Average Day

Mist hid the river as I walked into Central Area at 3:45 of a spring morning. The surrounding barracks slept in stony silence, gray and cold as the dawn. Providing the only sign of life, a small detachment of the military band readied instruments for reveille. Exactly at 5:50, fifes, drums, and bugles struck up a lively tune. No wonder the cadets call these disturbing musicians the "Hell Cats!"

Lights popped on in rooms here and there. Heads popped out windows to see a flag telling which uniform to wear. Fellows scrambled frantically into their clothes, while practiced upperclassmen put off for a few moments the agony of rising. At 5:55, first-year men assigned the duty began calling off the minutes. "Sir, there are four minutes until assembly. . . . Sir, there are three minutes . . . Sir, there are two minutes . . ."

Last-moment plebes poured from the buildings to stand at attention where their companies would form. The 6 o'clock assembly, a check to see that everyone is present or accounted for, lasted only a few minutes.

Upon dismissal, the men washed, shaved, and began tidying quarters for inspection. I joined second classman E. A. Gilbert to follow him through a typical day at West Point. He introduced me to his two roommates, also second classmen. The three belonged to the same company, C-1.

For a week at a time, Gil explained, one of the three had the job of polishing the room: sweeping, dusting, cleaning ash trays, emptying wastepaper baskets. Today Pete did these chores while Gil and Al made their beds, hung up clothes, put the cabinet shelves in

With Colors Flying, West Point Marches Into Its 151st Year

[illegible]

'Praise Saturday Night, and Pass the Cause!' After a Week of Drill and Study, Plebes Relax with Their Officer-Sponsor

Blackness Ranks of Polished Cadets Pass in a June Week Review

With Gothic Dignity, the Cadet Chapel Watches West Point on Parade

West Point's Line of Gray, Bayonets Gleaming, Swings Past Academy Museum Standing at Attention

A Feature Officer Learns How War Looks to GI Joe

"Let's See Some More Wrinkles in That Chin, Mister!"

A Guide Was a Life Membership in National Geographic Society

perfect order, and turned to the never-ending task of shining shoes and uniform brass. "Spit and polish" becomes second nature at West Point.

But all that glitters doesn't always show. I heard of cadets who had kept goldfish in the ceiling light fixture by day; at night they transferred them to the slop bowl lest a curious officer question eerie shadows floating around the walls and over the floor.

Others, challenging Academy regulations which rule out pets, have smuggled in hamsters and housed them in desk drawers. Their keepers fed them milk brought in plebe mouths from the mess hall.

Stiffly, a plebe entered our room, left the *New York Times* on a desk, departed stiffly. The upperclassmen seemed not to notice him. Gil looked up from the black shoe he was polishing, glanced at the headlines, and with a free elbow pushed the paper toward me. But then a bell rang, signaling another formation.

At 6:30 the battalions assembled on Jefferson Road outside the barracks. Fourth classmen had to report several minutes before the three upper classes; this routine holds generally for all formations.

"Right face . . . for-r-r-d 'arch." By companies the whole Corps marched off to Washington Hall for breakfast. As the men reached the first step of the entrance stairway, they removed their caps, broke ranks, and filed inside. Plebes jogged on the double. Upperclassmen walked quietly. All went to assigned tables and stood behind their chairs.

Breakfast for 2,400

From a balcony looking down on the three long wings of the enormous hall, the first captain (top-ranking cadet officer) announced over a loudspeaker: "Take seats."

Imagine 2,400 persons sitting down at once to a meal under one roof! What planning, what kitchen organization, what service! And the food comes in hot. This happens three times a day, every day.

Men of the same company sit together, 10 cadets, including three plebes, to each of some 240 tables. Plebes have specific duties during meals, the "coffee corporal" pours coffee or tea; the "water corporal" milk, water, fruit juices; the "gunner" sees that the waiters keep the table supplied.

While eating, these fourth classmen must observe rigid forms of behavior. Always straight-backed, they may sit on only the forward half of the chair; they must keep chins well in and eyes glued to the table; they do not speak unless addressed, never without permission (page 618).

As Gilbert's shadow, I took my place next to him at a table soon amply supplied with fruit, dry cereals, scrambled eggs, toast, butter, jam, coffee, and milk. Unbending plebes jerked through the meal with machinelike motions.

Less than thirty minutes after his order to take seats, the first captain called, "Battalions rise"; all cadets left the hall for barracks.

When I re-entered my friends' room, an hour remained before the day's first class at 7:55. Al, an athlete somewhat behind in his work, went straight to his desk and opened books. At a more comfortable academic level, Gil swung his legs over the corner of a table, leaned back in his chair, and lit a cigarette. (Smoking is allowed in barracks rooms.) Pete checked everything for inspection.

To West Point via Korea

News in the paper led to talk of Korea. Gilbert, it turned out, had served there as an Army private.

"That's how I got an appointment to West Point," he explained.

He had attended a military school in Alabama but was unable to get a congressional appointment to West Point. His father advised him to enlist in the Army and try for admission to the Academy through service channels. This worked, but not before a tour of duty in Korea; there Gilbert took the competitive examination.

"It isn't unusual," he said, "a lot of cadets enter the Academy that way. About 32 percent of my class had military experience before coming to West Point."

"All very interesting," said Pete, "but we have 'juice lab' coming up in a few minutes."

With Gil and Pete I walked to the electricity laboratory. They worked as a team to set up an apparatus of intricate wires, switches, buttons, coils, lights, and what not. Baffled from the beginning, I never did figure out what they were doing. On a mimeographed page handed me by an instructor I read the object of the test: "To determine experimentally the characteristics of a vacuum tube the design data on which is that listed in the Preliminary Sheet." Is that clear?

After two hours in this laboratory, Gil and Pete had a half-hour break before the next class at 10:35. Back at their barracks, they pounced on the morning mail delivered by a plebe. Pete lost himself in a letter from his girl; almost automatically, Gil resumed polishing of shoes and brass; Al studied.

Shortly before 10:30 we walked up the hill to the filtration plant of the West Point reservoir. In connection with the study of mechanics of fluids, the class today toured this installation. Usually, the cadets receive

"Every Cadet Recites Every Day in Every Subject"—a West Point Scene Almost as Old as the Academy

Glazed Fists Punch and Parry in a West Point Gym Class. A Photographer's Flash in 1/5000 Second Freezes Action.

[illegible] in this course at one of the academic departments.

[illegible] into the mechanics [illegible] terms. On a big blackboard someone had [illegible] up, "Old soldiers never die; but 24 Johns do." The fluid P's don't even fade away. "Fluid P's" are professors of fluid mechanics [illegible] Johns, of course, are [illegible] lieutenants.

At [illegible] the Corps formed on Jefferson Road for the march to dinner, and the Band [illegible] played the [illegible] marches into Washington Hall, [illegible] Gilbert as usual. I sat down to a table loaded with [illegible] and cabbage, boiled potatoes, [illegible] butter, [illegible] crackers and [illegible] later.

A senior [illegible] "[illegible] one of the plebes. [illegible] Mister." The fourth classman replied [illegible] current [illegible] athletic events and special programs for the week, coming Saturday night and Sunday shows, number of days until next Navy game, vacation, and graduation.

Plebes must always have correct, ready answers for other questions: How many lights in Cullum Hall? How many gallons in Lake Reservoir? How many names on Battle Monument? What is the definition of leather?

To the last question one replies briskly and precisely as follows: "If the fresh skin of an animal, cleaned and divested of all hair, fat, and other extraneous matter, be immersed in a [illegible] solution of tannic acid, a chemical combination takes place. The gelatinous tissue of the skin is converted into a nonputrescible substance [illegible] to and insoluble in water [illegible], is leather."

Every Cadet Revises Every Day

My companions used spare time before the first classroom class to review a chapter of Bar Lesson Issues. No student can go unprepared to class, hoping not to be called upon. West Point has an old axiom: "Every cadet revises every day in every subject." To assure individual attention, classes are divided into sections of about fifteen (page 610).

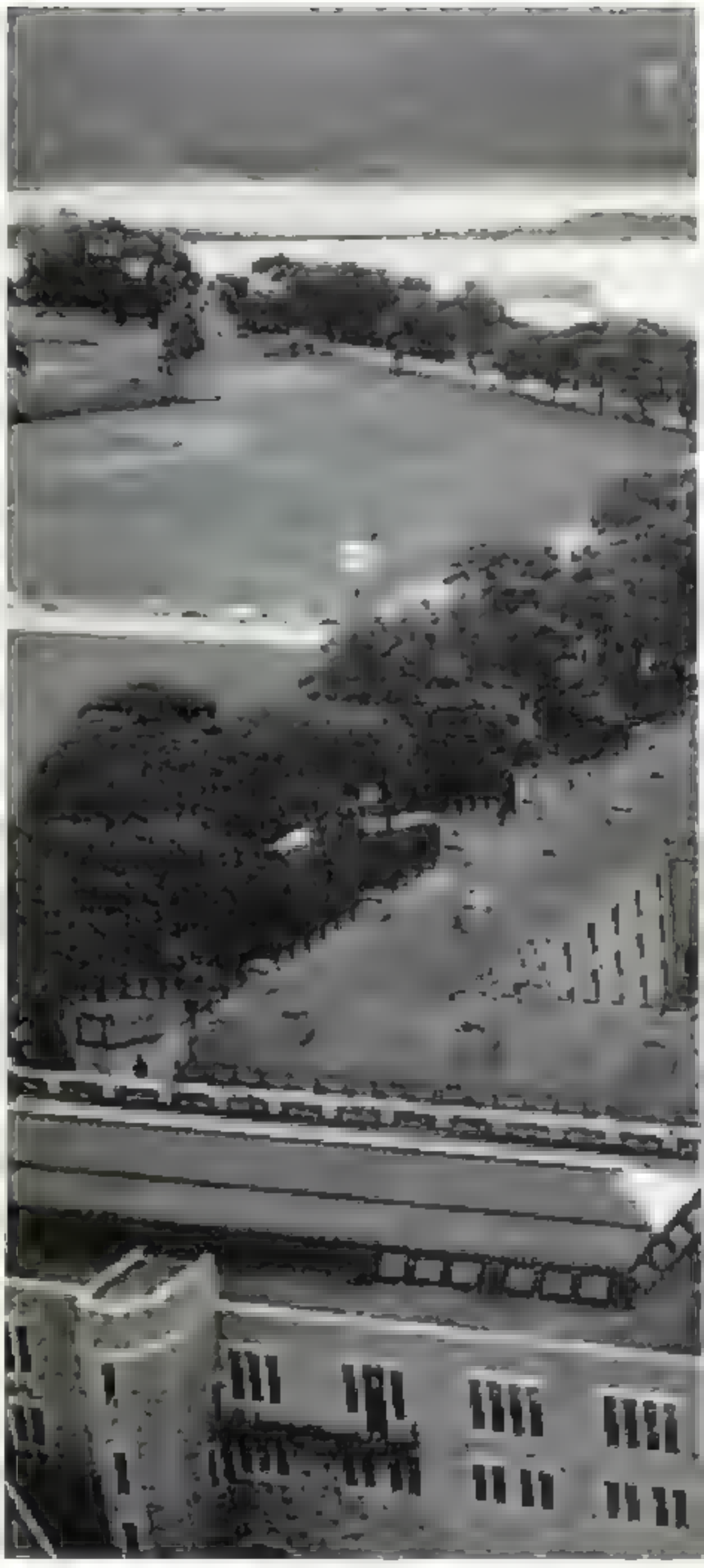
Entering the West Academic Building a little before 1 o'clock, Gilbert introduced me to Lt. Col. Jerry Sage, [illegible] of the social sciences.

With the students I sat at one of a number of small tables forming three sides of a rectangle in front of the professor's desk. The atmosphere was one of informality; the [illegible] appeared at ease, [illegible].

Colonel Sage led off with questions about America's attitude toward the Japanese in Manchuria, China, and Korea during the decade preceding World War II. Hands around the room shot up as men volunteered answers.

"What about the Portsmouth and Washington conferences?" he asked, looking at me.

I felt as small as my memory. Happily, a



cadet near the [illegible] of the [illegible] class [illegible]

As the present Superintendent, Maj. Gen. Frederick A. Irving, [illegible] it appears more and more [illegible] to function most effectively, an officer of the armed services must understand international and national politics as well as military subjects.

So West Point now prepares students to be statesmen as well as soldiers, diplomats as well as professional officers. Yet, even with this newest curricular shift, the Academy building always on the cornerstone of a system almost

West Point's Quadrangle Rings to the Tread of Future Army Leaders

[illegible] Field and the Harbor

[illegible] leadership [illegible] character and knowledge.

[illegible] West Point [illegible] started with [illegible] Superintendent [illegible] 1933. [illegible] called "Leaders of the Military Academy." [illegible] West Point out of its early doldrums and turned it into an adventurous technological college. It was the country's first and [illegible] school.

[illegible] Flagler [illegible] the Army [illegible] the [illegible] the [illegible] the [illegible] West Point did "more to build up the system of in

Howell Walker

End of School Year Has Its Moving Moments

S[illegible] quarters [illegible] to make room for 642 members of [illegible] in July. [illegible]

ternal improvement [illegible] harbors, lighthouses, for example, in the United States than all other colleges combined," said Francis Wayland, president of Brown University from 1827 to 1855.

All Cadets Take Same Course

Gradual liberalization of the curriculum, with less emphasis on engineering, began after the Civil War. Trend has been toward general and cultural studies. More than ever, West Point today aims to provide a broad foundation of general scientific education and military science.

The difference between West Point and a civilian college's curriculum is that all cadets take the same courses, with virtually no electives. The Academy requires study of one foreign language, with a choice of Spanish, French, Portuguese, German, or Russian; otherwise, subjects are rigidly prescribed (page [illegible]).

Specialization has no place at the Academy. That comes after graduation, when a man enters the particular branch of the service. But which branch depends on his standing in class and his personal preference.

Cadets receive their entire education at Government expense. They receive in addition an [illegible] allowance [illegible] [illegible] and [illegible] medical attention.

In an average day a cadet has [illegible] he has a half hour to himself. [illegible] a week. These include study time [illegible] care of [illegible] equipment.

Cadets [illegible] free time between [illegible] and 5 [illegible], instead of writing letters, reading, studying, or visiting friends, they talked with me. Oddly, no one shined shoes or [illegible]. They explained the organization of the Corps.

"We have a brigade of two regiments," [illegible] began. "Each regiment has three battalions, each battalion four companies. In the first regiment companies are lettered A-1 through M-1; in the second, A-2 through M-2. There are 24 companies. So you see there are 24 companies altogether, with about a hundred men to a company."

"What do you do for athletics?" I asked.

"Al's a varsity track man," said [illegible]. "Pete and I are playing soccer on our company team. We have a game this afternoon to decide the championship of the First Regiment. C-1, that's our company, meets B-1."

"If we win," Pete added, "we get a crack at the Second Regiment's top team for Corps championship."

"What's your event?" I asked Al.

"I run the quarter-mile, but not so well

Summer Training in Field Tactics Bridges a Gap in the Academic Year

[illegible]

since I hurt my knee in football. Anyway, I'm training with the hope of running against Navy this Saturday.

In the tradition established by former superintendent Gen. Douglas MacArthur, every cadet is expected to be an athlete. MacArthur's view of physical fitness appears on a wall of the well-equipped gymnasium: "Upon the fields of friendly strife are sown the seeds that, upon other fields, and on other days, will bear the fruits of victory."

Al left for track practice, and I accompanied Gil and Pete to the soccer field. Sitting on the side lines, I watched a spirited, hard-fought, fast, close game. C-1 beat B-1 for best-in-regiment. No one exhibited extraordinary skill; all showed sportsmanship and teamwork. Winners and losers appeared to get a real kick out of the contest.

"Watch Your Step, Mister!"

After their shower, my friends joined me in their barracks. Gilbert suggested we walk over to the "Boodler's," a soda fountain for upperclass cadets in Grant Hall. When we returned, we found two plebes straining at [illegible] the floor outside the door.

"What are you doing here?" snapped Pete.

"Sir," said one of them, "we were told to report to you our deficiencies at drill."

"Namely . . . ?" Pete asked.

"Dirty glove, sir."

"Out of step, sir."

"After all these months at the Academy, you certainly should know better," said Pete. "If you don't, you're mighty poor soldiers and pretty sad investments for Uncle Sam."

"Sir, the laundry . . ." but the explanation died there.

"Haven't you ever tried washing your own gloves?" Pete obviously had.

The plebes stood stiffly against the wall, looking straight ahead. The upperclassmen seemed to ignore them for the next five minutes. Finally Pete dismissed them. They turned sharply and left the room, stooping to pick up their caps from the hall floor.

For more serious offenses cadets receive demerits; punishment is marched off in Central Area. One victim of this system figured that his accumulated walking mileage would take him from West Point to Columbus, Ohio, and back.

The Corps marched to supper at 6:15. As soon as we sat down, a plebe at our table spoke up: "Sir, may I ask a question?"

"Shoot," said the senior cadet.

"Since our company won the regimental championship in soccer, sir, may the fourth classmen sit at ease during this meal?"

Request granted, wrinkles came out of chins as the three plebes relaxed and looked more human. I think I enjoyed their freedom as much as they. It was a good supper: ham and pineapple, mashed potatoes, lima beans, bread and butter, coffee and milk, salad, blueberry pie.

Charles Canham, the senior at my left, mentioned that he had served with the Army before entering West Point; the life after leaving the Academy would not be entirely new to him. Marriage would, though; he told me he planned to wed upon graduation.

I accompanied Gilbert back to barracks. On his desk we found an envelope addressed to me. Canham had sent an invitation to his wedding in the Cadet Chapel.

Cadets spend evening hours preparing for the next day's classes. Lights go out at 10:15. Men studying for examinations may have permission to stay up until 11 o'clock. Others have been known to stay up anyway, blanketing windows and chinking door cracks.

Ingenious cadets will always find ways of coping with West Point's prohibitions. Before radios were allowed in rooms, a true music lover hollowed out the wall behind his mirror and installed a set. He hooked it up so that, when the door opened, the program automatically switched off.

In the days when every room had a fireplace, [illegible] to hide at least one loose brick. A man had to hide illicit "booze" (food or drink) somewhere. One story tells of General Sherman's return to the Academy after the Civil War. He strode to the quarters he occupied as a cadet. Drawing his sword, he prised up a brick and revealed a cache. His smile seemed to say, "Same old place."

Relief from Daily Grind

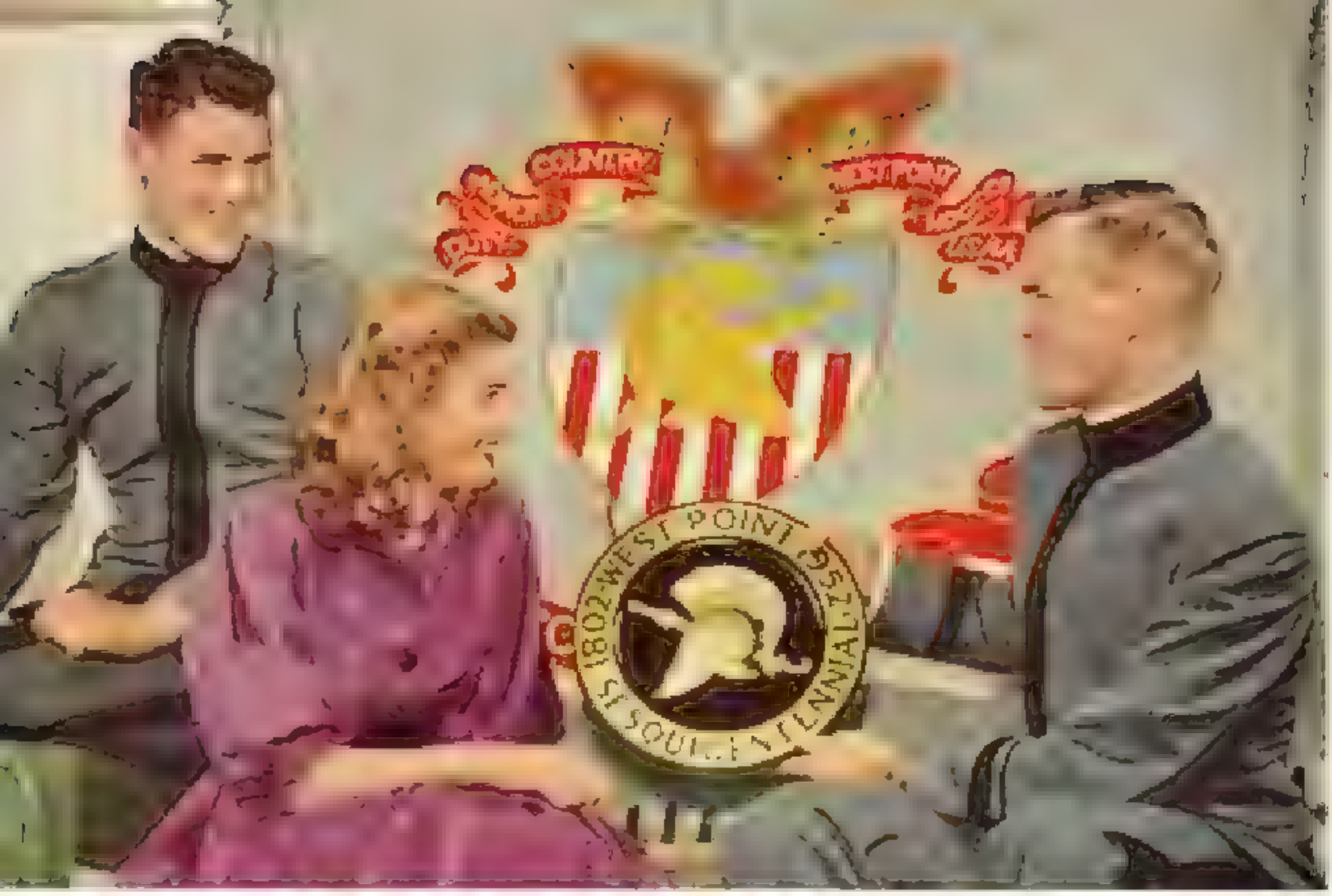
But cadets do enjoy legal relief from parading, studying, shining shoes and brass. They invite girls to weekly dances called "hops" (page 623), or stroll with them in the wooded seclusion of Flirtation Walk by the riverside; go to week-end movies and Sunday chapel services; belong to the choir, orchestra, glee, chess, radio, camera, and other clubs; and compile such publications as yearbook, magazine, and a comprehensive handbook for the entering class.

During football season the entire Corps

[illegible]

Dress Whites and Gay Finery Bloom at a Garden Party

At the end of West Point's academic year, the Superintendent holds a reception on the grounds around his quarters. Guests include alumni and graduating cadets with their families and friends. They stroll through flower gardens past a giant copper beech (left) to lawn [illegible] serving refreshments.



She Admires a Bronze Medallion

[illegible]

Plebes Sit Stiffly at Table

[illegible]

Some West Pointers Learn Russian

Arms Meets Navy in Friendly Exchange

Bay and Battle Monuments, on Trophy Point, Along the Hudson River

[illegible]

"May Our Worship of Thee Be Natural" — The Cadet Prayer

[illegible]

The Day Carries for Whitecapped Graduates

[illegible]

At West Point, Dance Is "Hop"; Girl Is "Dream", Jane Is Grand

Flashing an Old Tradition, Swords Arch Above a New Lieutenant and His Bride

travels to New York City or Philadelphia to cheer their Army team in several major games. At Christmas all but plebes go home for vacation. Throughout the year varsity athletes travel to other colleges for matches in various sports.

From February through April, cadet-midshipman exchange visits let groups of second classmen spend several days at Annapolis, while members of the Naval Academy's corresponding class have their turn at West Point. At both institutions the guests share barracks rooms with hosts, march in formation, attend classes and meals together, and generally live the life of their counterparts (page 619).

"Since unification of the services," said an Annapolis man, "it's more important than ever that the Army and Navy become acquainted. We'll have to get along with each other for the rest of our lives, so we might as well start right now."

Times Change, Traditions Stay

One afternoon I visited the editorial office of the *Howitzer*, the fat annual of the Corps. This permanent record of each graduating class's four years at West Point is published by a senior staff assisted by underclassmen.

"Hardest thing of all," said the cadet editor in chief, "is trying to find opportunities to work on the book. Whatever time we devote means just that much taken from studying. Our marks suffer, but we get the satisfaction of having turned out something we consider worth while."

I heard an underline in this office ask permission of a top editor to watch a few innings of the varsity baseball game with Fordham University. The editor's answer was, in effect, "Which is more important to you—that ball game or this yearbook?"

The staff of the *Howitzer* has a pretty good idea of what's going on and what has gone on around West Point. I asked one of the senior members what changes had taken place during the past 10 years.

"This place doesn't change; it gets modified [illegible] but [illegible] any drastic changes. Sure, they may have let up on the hazing, but generally things stay much the same. After all, tradition is everything here; I guess that's what makes West Point distinctive."

To the statue of one hard-riding officer some cadets pay more than passing respect. It is a memorial to Civil War Gen. John Sedgwick, a life-size figure cast from cannon captured by his corps. He still wears his own spurs, and they still spur. Tradition says that a student behind in his lessons will pass coming exams if he sneaks out in the dark of night and twiddles the general's spurs.

Even if West Point doesn't change much, times do. Traditionally, a cadet used to look to graduation for three special privileges denied him during four years at the Academy: a mustache, a horse, a wife. These days the first classman, who wouldn't know what to do with a horse, may garage their own automobiles in the obsolete riding hall; and where cavalry once galloped, cadets of the armored-vehicle era put mileage on their new cars.

Academy Started with 12 Cadets

When the United States Military Academy opened at West Point in 1802, it had a total enrollment of 12 cadets. Now, in 1952, the Academy is celebrating its sesquicentennial with a Corps numbering 200 times that many.

America's oldest permanent Army post has expanded its once humble plant to several hundred buildings on a 15,000-acre reservation. Its more than 18,000 graduates have served the country in war and peace with courage, intelligence, and loyalty; many have distinguished themselves as generals, engineers, statesmen, and diplomats.

By their achievements these leaders of men best express the character of West Point. In our every war since the Revolution, West Pointers have helped lead the Nation to victory.

But the Academy is no Martian laboratory for supermen. Those who train here represent a cross section of able young American manhood. West Point teaches all alike that leaders are not born but developed.

Glorious June Week the Culmination

One of the greatest traditions is June Week, glorious days filled with excitement and sentiment; parades, promotion, and prizes; girls, graduation, and brides (pages 602, 606, and 624). This culmination of the entire cadet year marks the winning of a goal and beginning of a new task for every man in the Corps.

The final and most colorful parade climaxes long months of precision drilling. To the stirring tune of *Stars and Stripes Forever*, the battalions march onto the Plain in solid blocks (pages 604-5).

Hundreds of starched white trouser legs move with mechanical exactness; arms swing in perfect rhythm; brass sparkles on the sea of gray coats and on plumed full-dress helmets, swords flash among gleaming bayonets.

No spectator would guess that among these faultless ranks out on the Plain a constant babble of low voices relieves the monotony of having to represent perfection.

The moments immediately following this parade mean more to the plebes than any in the whole year. With warm handshakes they receive congratulations from upperclassmen

No More Boxing and Chin-wrinkling—Plebes Relax with "Recognition"

[illegible]

in recognition of what it takes to survive in the life. No more boxing and wrinkling of chins as underlings are losers. From now on they will assume the privileges and responsibilities of upperclassmen.

Next morning comes the "cow" squads have marched toward, [illegible] and drums are during [illegible] years. At the single but impressive [illegible] ceremony, the Corps of Cadets [illegible] the large Field House. The [illegible] together in a square capped with [illegible] and [illegible] with [illegible].

When the [illegible] reach the first classmen, in order of academic standing, the [illegible] the superintendent, who [illegible] with [illegible] and [illegible]. The [illegible] represents a culmination of several years of a commission in a special [illegible] at the Regular Army or Air Force.

Last [illegible] "the goat" [illegible] the Dean of Faculty or Commandant of Cadets [illegible] the [illegible] and the rest of the [illegible] takes the [illegible].

The [illegible] Class [illegible] are the Seniors [illegible] throw their [illegible] toward the [illegible] and [illegible].

Whether their assignments take them to Europe or Germany, Cadets of [illegible] know that will [illegible] West Point [illegible]. They have learned [illegible] that we value [illegible] Tony Hope, [illegible].

So they go, but others like them move up to take their places in the "long gray line" [illegible] West Point [illegible].

[illegible]

Cyprus, Idyllic Island in a Troubled Sea

Britain's Eastern Mediterranean Base Has Known the Tramp of Many Armies, but Its Countryside Is Changeless

By Jean and Franc Shor

With Illustrations from Photographs by the Authors

RAY M. [illegible] bowed low over gnarled olive groves near ancient Nicosia, capital of the sun-drenched island of Cyprus.

In quiet contrast, farmers and their women-folk sickle-harvested golden fields. Stolid oxen dragged wooden sledges around threshing floors [illegible] winnowed the grain by tossing it against the sky.

Jean and I pulled our British sports car off the highway to photograph a lanky shepherd tending a flock of fat-tailed sheep. With goatskin pouch and cloak of many colors, he seemed a character straight out of the Old Testament.

Then the whistling roar of a jet plane shattered the illusion and scattered his sheep. His burro kicked, brayed strident protest, and took off across the fields.

"It's nothing," said the shepherd after he had reassembled the wild-eyed animals. "Always Cyprus has been a base for other men's armies. My grandfather sold sheep to feed British sailors, and his father sold meat to the Turks. Now my flock feeds English parachutists.

"Soldiers pass on the highway or fly overhead, but they don't change the way we live."

Strategic Cyprus Key to Near East

Jet planes are only the latest war gear in the long and troubled history of Cyprus. Since the dawn of time its strategic location, only 45 miles south of Turkey and 65 miles west of Syria, has made it a coveted prize of warring nations (map, page 641).*

Egyptian warriors first conquered Cyprus about 1500 B.C., and nearly a dozen empires ruled it before the island became an important British dependency 74 years ago. Today it is Britain's key to control of the Near and Middle East.

During last year's disturbances in Iran, British planes and troops stood poised on Cyprus, ready for action if British lives were threatened (page 657). When violence flared in Egypt over the Suez Canal, the crack 16th Independent Parachute Brigade flew from Cyprus to the trouble spot.†

Jean and I reached Cyprus by ship from Beirut. From the captain we learned that the island is many things to many people.

"We have honeymooners from Cairo heading for a secluded hotel 6,000 feet up in the mountains," he said.

"An American oil man and his wife, stationed in Damascus, are looking forward to a vacation of swimming and sailing at Kyrenia.

"A Greek archaeologist plans to study excavations at ancient Curium.

"The Roman artist you see there in the beret is going to copy 12th-century Byzantine frescoes.

"A professor from Beirut's American University is on his way to study medieval castles and Gothic churches on Cyprus.

"There's a retired British Army officer with us who is moving to the island because living costs are lower in Cyprus. And the American expatriate you met is planning to set up an office in Nicosia."

Cities Booming, Country Unchanged

Cyprus, we found, has felt the torch of progress. In booming cities, glass-bricked modern homes rise in the shadows of ruined medieval palaces. Gleaming shops offer the latest British and American products. Smooth highways crisscross the island.

But outside the cities, off the main roads, live people like the shepherd near Nicosia who cling to the old ways.

About 65,000 of the half-million people of Cyprus are farmers. From their lands come citrus fruits, wine, vegetables, grain, seeds, and carobs, a bean used as fodder. Farm products account for more than a quarter of the island's exports, which total some $30,000,000 a year.

Except for about 80,000 islanders of Turkish descent, and other small minorities, the people of Cyprus are Greek in heritage, language [illegible] Their traditions survive from classic times; a Greek of the Golden Age would feel at home in the mountain villages and small farms of Cyprus in 1952.

A Greek festival took us first to Famagusta, busy seaport on the island's eastern coast.

* See "American Fighters Visit Bible Lands," by Maynard Owen Williams, National Geographic Magazine, March, 1946.

† See, in the National Geographic Magazine, "Journey into Troubled Iran," by George W. Long, October, 1951, and "The Spotlight Swings to Suez," by W. Robert Moore, January, 1952.

A Cyprus Farmer Tosses His Wheat to the Wind. Kernels Fall, Chaff Blows Away

[illegible] 14th-century traveler called this the richest [illegible] in the world. Legends tell of a merchant prince who kept five [illegible] dogs [illegible] two days and of a [illegible] at which guests were invited [illegible] from golden bowls heaped with precious stones.

Today in Othello's Home Town

[illegible] raches ended when [illegible] the city in [illegible]. [illegible] were destroyed, and a wall [illegible] fires, was thrown around the city.

Today Famagusta is a magnificent example of a fortified medieval city. Its fortifications include a tower where Cristoforo Moro, the Venetian lieutenant governor, had his home. He is thought by some scholars to have been the model for Shakespeare's Othello.

When we [illegible] Famagusta's annual Flower Festival [illegible] By tradition, the [illegible] held on May 1, but Communists [illegible] Communists might turn than [illegible] a political demonstration, now held it late in the month.

Hundreds of schoolgirls [illegible] paraded with flower-covered [illegible] a audience of thousands [illegible] ancient Greek [illegible]

The [illegible] were meant to be serious [illegible] chance ended them on a note of hilarity.

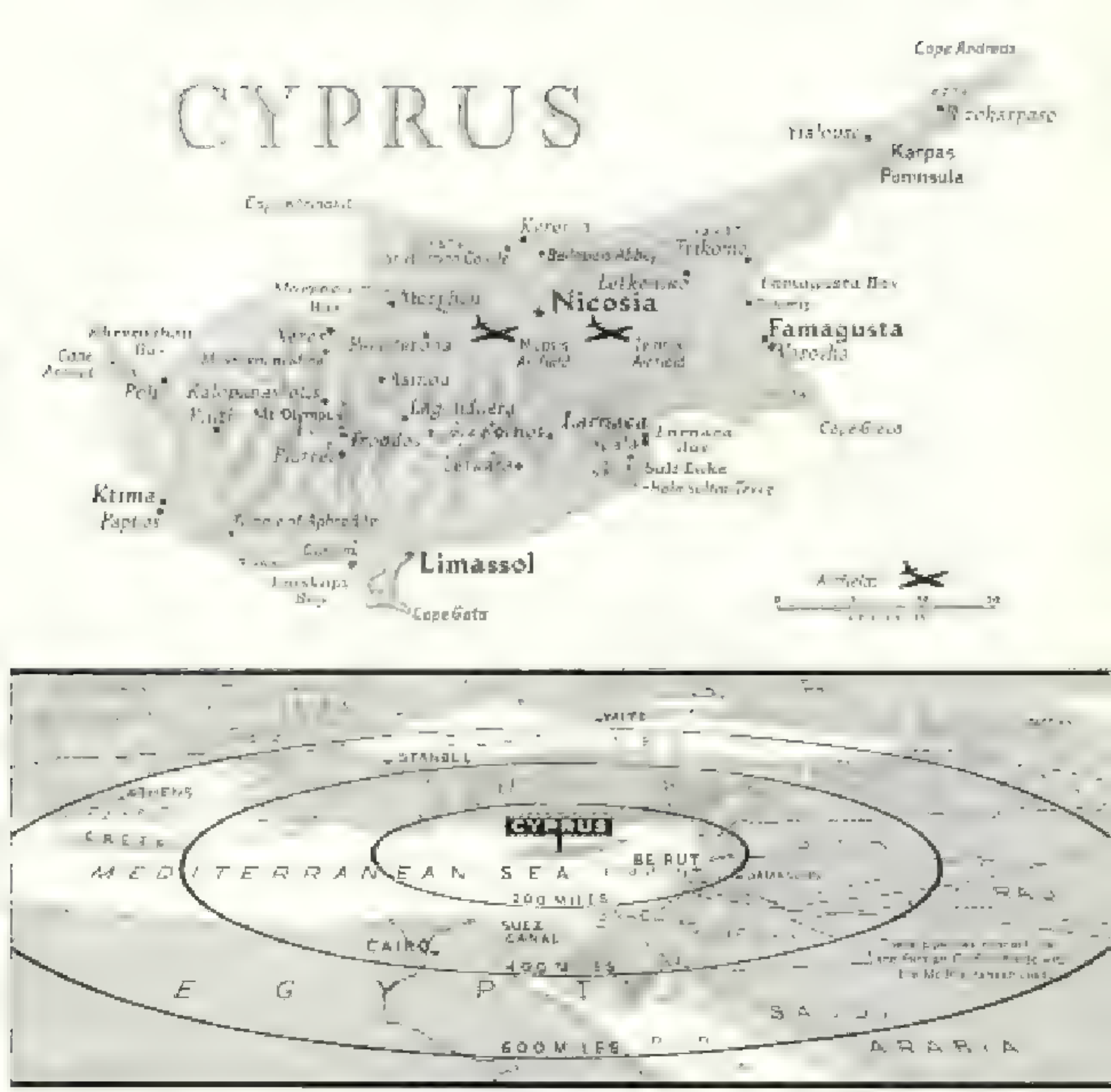
On a stage in mid-field a pageant portrayed the slaying of [illegible] nymphs. As he [illegible] the floor, covering [illegible] they remained for several minutes.

In the front row of the spectators [illegible] the five-year-old brother of one of the dancers. When his sister remained motionless

Nicosia, Circled by Medieval Walls, Is the Capital of Modern Cyprus

[illegible]

Lands of Cyprus Seven Page with Text



From Her Cyprus Stronghold Britain Watches Over the Near and Middle East

[illegible] frontier in an hour. Moscow is 1,000 miles [illegible] about as far as from Denver, Colorado, to Washington, D. C. Cyprus, chiefly Greek in custom and language, has been a British dependency since 1878.

so long, he began to worry. Finally he left his seat and ran as fast as his short legs could carry him to his sister's side.

For a moment he stood looking down at her, then walked slowly around her motionless form. In a desperate effort to rouse her he poked her sharply in the ribs. The surprised girl leaped to her feet with a scream, and the crowd dissolved in laughter.

We spent the night with George P. Georghiou, a noted artist. His career illustrates the island's easy-going way of life.

A lawyer and man of property, Georghiou was a leading figure in Famagusta's business life. One day he failed to appear at his office. A week went by, and clients and friends, worried, visited his home. They discovered him busily painting at an easel. He found the practice of law dull, he told them, and had decided to become an artist.

Winning success, Georghiou has had one-man shows at Oxford University and in Paris. Museums and private collectors have bought many of his paintings. With him we toured the city.

Perhaps the most beautiful relic of Famagusta's glorious past is the Cathedral of St. Nicholas, now a mosque for the city's Turkish minority (page 634).

Modern Famagusta, like all Cyprus, is a

striking blend of past and present. Late-model automobiles squeeze through narrow winding streets, blasting their horns at donkey riders, horse-drawn carts, and crowds of pastoral Greek peasants, brightly dressed Turkish women, and black-robed Greek Orthodox priests.

Coppersmiths ply their ancient trade in open-fronted shops next to modern establishments offering the latest in English woolens, cashmeres, and American novelties.

On the city's water front, brightly painted caques lie at anchor alongside smart motor launches (page 635). Ruins of Gothic churches cast shadows on modern houses. In offices and homes a customer or visitor is invited to sit down while the host sends for cups of thick, sweet Turkish coffee. In they come on a brass tray carried by a barefoot boy from a streetside stand.

DDT Wipes out Scourge of Malaria

Not long ago malaria was the scourge of Famagusta. Soon after the war, island health officials launched a campaign against the anopheles mosquito. Teams of workers armed with DDT guns covered Cyprus from end to end. About a year ago the island was officially declared free of the dread disease for the first time in history.

Returning to Nicosia, we soon found that East and West meet in Cyprus, sometimes violently. The first day there our taxi, weaving through narrow, crowded streets, rounded a corner and sideswiped a bicycle. The cyclist careened into a baggy-pants farmer, who fell against a plodding donkey loaded with melons. The frightened beast leaped onto a sidewalk, and the basket on his back smashed a shop window, scattering the melons amid a display of plastic dishware.

Driver, cyclist, pedestrian, and donkey herder waved their arms and shouted in furious argument.

"There," said Jean, "you have 2,000 years of progress compressed into one accident."

After settling the uproar as best we could, we looked up Mr. G. F. Jarratt, director of the Cyprus Tourist Development Office. Expecting us, he had arranged a visit to the 17th century Mosque of the Dancing Dervishes.

As we entered a large chamber at the end of a long, domed corridor lined with tombs, the head dervish, seated in the center of the floor, was chanting a nasal refrain. Around him squatted half a dozen dancers. Perched in a gallery, flutists and drummers played a plaintive, throbbing melody.

Suddenly, at a signal from their leader, the dancers rose, threw off colored cloaks, and stood clad in white jackets and breeches. Slowly they approached the leader, bowed, crossed their hands, and began whirling. Around and around they spun, holding their arms straight out and circling the chamber as they twirled.

Faster and faster went the wild, whirling dance. It lasted nearly forty minutes.

Suddenly, without any signal visible to us, the silent, expressionless dervishes dropped to the floor and lay motionless. Attendants threw the cloaks over the prostrate forms.

The dancers arose, apparently not even out of breath from their fantastic performance, slowly filed past their leader, kissed his hand, and left the room. But as we left, Jean and I were dizzy, just from watching.

The next day Jarratt introduced us to his assistant, a young Cypriote named Renos Wilcsan, who would be our guide and interpreter.

On our first evening together, Renos took us out for a Cypriote meal of skewered lamb, *kebab*. We drove through alleylike streets, past half a dozen kebab stands empty of customers, to a tiny shop built of corrugated iron and old boards. There a throng was gathered in front of an open charcoal grill.

"Your Mr. Emerson was right when he said that if you build a better mousetrap than your neighbor, the world will beat a path to your door," Renos said with a smile. "There must be a hundred kebab shops in Nicosia, but this man makes the best, and everyone comes here."

Kebab Sandwich Makes a Meal

When our turn came, the proprietor drew half a dozen skewers of lamb from the grill for each of us. He took a large circular piece of flat Cyprus bread and cut it in half. Then he split one half, dropped roast lamb from the skewers into the cleft, and sprinkled it liberally with onion and chopped parsley. Over the meat he squeezed the juice from an enormous Cyprus lemon. He handed it to Jean and made two more for Renos and me.

Jean's eyes widened as she bit into her sandwich.

"This is the place for me," she said with her mouth full.

I tasted my sandwich and agreed. For the rest of our stay in Nicosia our modern hotel never saw us at dinnertime. A 15-cent kebab sandwich was all either of us could eat, and we never tired of their delicious flavor.

With Renos we drove into the mountainous interior to visit two small Byzantine churches at Asinou and Lagoudhera.

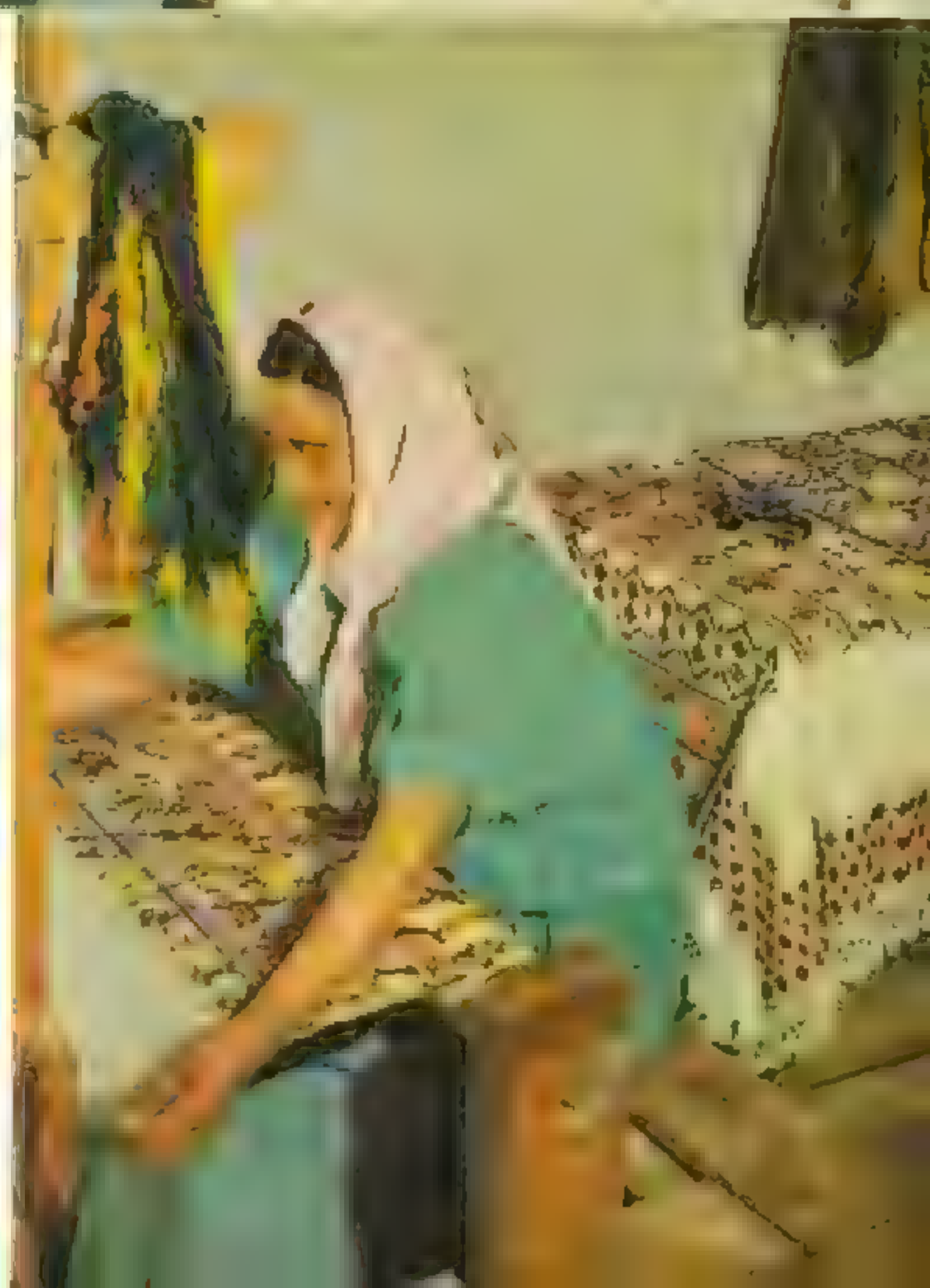
Our hearts were in our mouths much of the time, for the roads of Cyprus are narrow and when two cars pass each must get its outside wheels off the pavement. Drivers stay on the hard surface as long as possible. They

"Welcome to Cyprus!" A Zealous Girl Says It with Fruit and Water

A Gothic Cathedral of St. Nicholas Became a Mosque When Turks Captured Famagusta in 1571

[illegible]

Schoolgirls Blossom Out as Classic Greek Styles for a Flower Festival



This Dancer Happily Prolonged His Siesta to Oblige the Authors. "Loafer!" Shouted His Wife, Toiling in the Sun

Mystic Blue Spots
"Etoiles" Oscares

Puzzle: Find the Mule!

Level Pines Stands Out Above the Bay

Homemade Sock Helps Fill Cypriots' Girls' Hope Chests

[illegible]

Women of Kerres, Shaping Jars, Spurn the Potter's Wheel

Like Its Terraced Vineyards, the Village of Kalogeraeis Goes Up in Steinsteps

[illegible] Mount Olympus [illegible]

Vacationists Find Relief from Summer's Heat at This Air-conditioned Retreat

[illegible]

Boats and Water Lure Boys the Whole World Over. These Youngsters Practically Live in Lérwick Harbor

Prickly Pears and Grape Leaves Provide Delicacies, but Wheat Remains the Staff of Life

Sunshine Floods the Crumbling Passages of Concourse at St. Hilarion Castle

drive straight down the middle of the road, charging directly at each other, until the last split second. Yet we never saw an accident.

The tiny Church of the Blessed Virgin Mary at Asinou was built about 1100. Its early frescoes, still bright and colorful, are among the finest of their kind in the world.

From Asinou to Lagoudhera we bounced over winding country roads, pausing for an occasional flock of fat-tailed sheep (page 630) and stopping for lunch at a little village.

Capers Bring Islanders Profit

The town had no restaurant, but a hospitable woman offered to feed us in her one-room home. Quickly she produced a lunch of eggs, goat cheese fried crisp brown in olive oil, and a salad of pickled caper leaves.

The Cypriotes, Renos told us, export their capers, which bring a luxury price in world markets, and save the leaves for home consumption. They have much the same delicious flavor as the capers themselves.

At Lagoudhera we visited the Church of Panayia Tou Arakou. The paintings here, dating from the 12th and 13th centuries, rival those of Asinou and are in equally good condition (page 659).

An aged Cypriote ushered us through the chapel-like church, beaming with pride. A few years ago he had been a prosperous farmer. Then the Virgin Mary appeared to him in a dream and told him to devote his life to the care of the church.

Obediently the man sold his farm, gave the proceeds to the church, and went to live near it. He keeps a few goats in the courtyard and tends a little garden; near-by villagers supply his few wants. He keeps the unused church spotlessly clean, tends the oil lamps which hang before the portraits of Christ and the Virgin, and leads a secluded life, faithful to his trust.

Coasting down out of the mountains at Xeros, on the north shore, we watched a puffing donkey engine push freight cars loaded with copper ore to the end of a long pier. Lighters ferried the ore to freighters bound for western Europe and America.

"The ore comes from the Mavrovouni Mine," Renos told us. "Copper has been taken from the area for more than 3,000 years."

Our very word "copper" comes from Cyprus, by way of the ancient Romans. They called the metal *Cyprium aes*, or Cyprian brass, because they found their best copper here. From the Latin term, later contracted to *cuprum*, came the English word "copper."

For a few days we lingered in Kyrenia, seaport on the island's northern coast (pages 651-651). Our headquarters was a modern hotel where three excellent meals a day and a room overlooking the sea cost the two of us only seven dollars.

Medieval Kyrenia was a fortified town, but its walls have long since crumbled into dust and only two stone towers still stand. The massive Castle of Kyrenia remains, however, and its thick walls and high towers give ample evidence why the Turks were never able to capture it by assault (pages 660-661).

The British 16th Independent Parachute Brigade occupied the castle when we visited it. The incongruity of this modern military unit occupying a structure which dates from the days of armored knights, crossbows, and catapults was striking.

The paratroopers continued the medieval tradition of changing the guard, a ceremony in which the key to the castle is passed from watch to watch.

With troops standing smartly at attention, the officer of the guard being relieved marched stiffly forward, saluted, and handed the key to the new officer of the watch. Then, to the roll of drums, they marched back to place.

Jean wanted a close-up of the actual passing of the key, and we asked the colonel if the men would repeat the ceremony, holding the key in plain view. There was a whispered consultation, a long moment of embarrassed silence, and then the colonel explained.

"There *is* no key," he said. "No one has had a key to this castle for 400 years. The guards simply go through the motions."

High above the town of Kyrenia, commanding the seaport coast for miles, stand the ruins of 13th-century St. Hilarion Castle. From the town the castle atop its rocky peak looks like an illustration from a fairy tale.

We drove [illegible] mountain road to a spot near the foot of the castle, then climbed for an hour up long flights of stone steps to reach the ravaged interior (opposite page).

Chivalry Through Picture Windows

Venetians dismantled the castle in 1489, fearful that it might fall to the Turks, but the ruins give a clear picture of its former greatness. Inside the thick stone walls were quarters for knights and nobles, stables, storehouses, cisterns, and chapels. The fortifications enclosed the whole mountain peak.

Far below spread a level field once used by knights for jousting. Through huge picture windows the ladies of the court watched tournaments without leaving their apartments.

A short drive took us from St. Hilarion to seaside Bellapais Abbey. This 13th-century Gothic building has been rocked by earthquakes, battered by invading armies, and sacked by Turks, but its weathered brown walls still hold beauty and charm. Its refec-

Man-made Sea Walls Enclose Kyrenia's Tiny Harbor

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] the water rose off a [illegible] flood [illegible] roads.

The [illegible] of [illegible] village [illegible] the [illegible] that their [illegible] were [illegible]. So the Government built a new village [illegible] and new [illegible] homes.

From Kyrenia we drove to the [illegible] resorts of Troodos and Platres. The Monastery of Saint Mamas, in the village of Morphou, called for a stop. The saint, [illegible] us, is a favorite of the islanders.

The [illegible], so the story goes, [illegible] at the [illegible] of the island. [illegible] visitors [illegible] never [illegible] and [illegible] for [illegible] he would not be [illegible] taxes. [illegible], however, [illegible] and sent soldiers [illegible].

As [illegible] to Nicosia [illegible] Saint Mamas [illegible] the [illegible] his arms, [illegible] back and rode [illegible] to Nicosia.

[illegible] the [illegible] and [illegible]. [illegible] that [illegible] by tax collectors.

[illegible] in Washington, D. C., [illegible] Collector of Internal Revenue.

[illegible] Morphou we left the coast [illegible] climbed steep mountain roads to Troodos. In Nicosia [illegible] temperatures of [illegible] 100° are common and islanders [illegible] refuge in the cool pine-covered slopes of the [illegible] mountains.

[illegible] forests [illegible] hotels and visitors [illegible] from [illegible] the Near East each year [illegible] Mediterranean heat [illegible].

Mystery of the Disappearing Shoes

[illegible] we were [illegible] in the [illegible] a [illegible].

The [illegible] told [illegible] service.

We [illegible] outside [illegible] and [illegible] the hotel to shine. [illegible] night a pair disappeared. We searched everywhere but couldn't find them.

The fourth day I saw [illegible] walking home after work [illegible] shoes [illegible] her [illegible]. I asked her where she [illegible].

"I found them," she [illegible]. "[illegible] away. [illegible] do you know [illegible] found [illegible]?"

[illegible] the [illegible] shoes, we stopped [illegible] Platres.

[illegible] high [illegible] of Aphrodite [illegible] from the sea. [illegible] blue [illegible] shore [illegible] covered with [illegible].

We [illegible] gazed [illegible]

Heads Snap Right in Salute as "Cyprus's Own" Swings Smartly Past the Governor

[illegible] of the Cyprus [illegible] Arab [illegible] Near East [illegible] with Brit[illegible] Army. [illegible] Times [illegible]

[illegible] herself come [illegible]

[illegible] farther on, the ancient city of [illegible], long deserted and covered with the waste of centuries, is being excavated by the Museum of the University of Pennsylvania. Atop cliffs towering above the lapping waves, archeologists have uncovered a theater and baths dating from early Greek and Roman times.

[illegible] early [illegible], the Museum says, is perhaps the earliest monumental record [illegible] the Greek world.'

[illegible] itself for the remains [illegible] Temple of Aphrodite. Not far [illegible] a broken marble pillar. To it, according to local legend, Saint Paul was tied and lashed [illegible]

A Village That Lives by Its Looms

[illegible] for a drive into the hills [illegible] Vineyard [illegible] of western Cyprus, we drove [illegible] of neatly tended terraced vines, [illegible] narrow lanes and stopped in front of a [illegible] mud wall. In a flower [illegible] in aged Greek [illegible], [illegible] and flowing skirt, welcomed us with glasses of native wine. Not until we had rested [illegible] our drink were we shown into her house, where her daughter was found at work at a loom which [illegible] of the small living room.

[illegible] the girl worked with [illegible]. Half a dozen [illegible] were taking shape in [illegible] she was making, and each was formed from memory.

Village girls start weaving early. They practice each of the patterns until they know the hundreds of necessary motions by heart. [illegible] score of patterns are they allowed to work at the family loom.

Rosanita, our hostess, [illegible] share her family's noon meal. Served in the [illegible] courtyard, it was a feast of fried [illegible], caper leaves, smoked pork, sausages soaked in wine, coarse bread, and cool bottles of wine from the family cellar. After lunch, over small glasses of native brandy, our hostess spoke sadly of the decline of [illegible].

"Only a few years ago [illegible], we had

more than five hundred people here. Our men tended the vineyards and sold grapes to the big wineries in Limassol. The women kept the gardens and flocks, and our weaving helped us live well.

"After the war wine prices dropped, and crops were bad. The people of our village had a hard time. Many of our young men had served in the British Army and traveled to other countries. Not satisfied with the simple life of Phini, they began to emigrate.

"Now nearly two hundred of the men have gone abroad. Many have taken their wives and families. They are in South Africa, Australia, and England, working as farmers, waiters, and cooks. The village is very lonely, and it's especially hard on the girl."

Emigration an Island Problem

The plight of Phini, Renos told us as we continued our circuit of the island, is typical of many Cyprus villages. Numbers of the younger men are emigrating. We asked Renos if he planned to leave his homeland.

"Never," he said. "I've been abroad and seen other countries. I'd rather live here than any place else in the world."

Cyprus may change, but of one thing we are sure: the islanders' hospitality is in no danger of dying out. As we stopped in one village after another, we were constantly besieged by friendly people eager to take us into their homes for tea, sweetmeats, meals, or wine.

Cyprus wines have been famous for centuries. The Crusaders brought European methods of wine making to the native vineyards, and their famous Commanderia, a sweet and heavy dessert wine, is still produced. Cypriotes prefer their wine well aged, and many island families offer vintages from bottles dated 1870 and older.

Today the wine industry is a million-dollar business. Large quantities are exported, and thousands of islanders depend upon their vineyards for a living.

The Cypriotes themselves are fond of wine, but in moderation. A small glass or two at meals and an occasional toast with a friend satisfy the local appetite.

On the southern coast between Limassol and Larnaca we passed an oil derrick. Friends had told us that major oil companies had surveyed the island thoroughly and decided the chances of a strike were too slim to warrant drilling. We stopped to investigate, and Renos had a long chat with the drilling crew.

"Local people are digging the well," he reported. "A water diviner who lives near here has always believed Cyprus must have oil somewhere. Some time ago he took the hazel wand he uses to search for water and visited Romania. There he studied how his divining rod acted when it was over oil fields.

"He returned here, and insists he got the same reaction at this very spot. Local bankers are financing him. The well is down nearly 3,000 feet, and geologists say early indications are very good."

We wished the drillers luck and continued on to Larnaca. This busy seaport is one of the oldest cities on Cyprus. In ancient times it was called Citium; legend says it was founded by Kition, the great-grandson of Noah. Here, according to Cypriote tradition, Lazarus was buried after his second death.

The saint's body was removed to Constantinople (Istanbul) after its discovery in the 9th century, but the ancient Church of St. Lazarus still stands near the center of the modern city. A magnificent marble sarcophagus is pointed out as that of Lazarus himself.

Old Christian churches are everywhere in the city, but perhaps its most interesting antiquity is the Moslem Tomb of Umm Haram (Hala Sultan Tekke), which stands beside Salt Lake. Umm Haram was a relative of Mohammed. She died in a fall from a mule and was buried on the spot where she met with her accident. Jean and I paid a visit to the beautiful mosque which has been erected there.

Unbelievers are not usually welcomed in mosques, so we were surprised when the bearded mullah in charge invited us inside. First, however, he brought a white scarf to cover Jean's bare head and, since I was wearing shorts, a skirt to conceal my legs.

Inside, walls were bare and whitewashed, the floor covered with colorful Oriental rugs. Reverently the mullah led us to the back of the mosque, where two huge pillars of stone reached nearly to the roof. Bridging them across the top was a massive block of stone, heavily draped in bright silks.

Draperies Serve a Purpose

The top stone, the mullah explained, was not resting on the two pillars; it was miraculously suspended in the air above them. He told us that the two pillars were erected by the faithful immediately after Umm Haram's death, on the very spot where she fell. The next night, he added, the top piece appeared, miraculously transported from Mecca, and hung in the air over the sacred spot.

"I am sorry the draperies spoil your view of the miracle," he said, "but those who come to pray might be frightened by the sight of the block hanging there with nothing to support it, and it has been necessary for us to conceal it."

From Larnaca we headed inland to the mountain hamlet of Lefkara, famous for cen-

turies for the magnificent lacework its women-folk produce. Its cluster of dwellings clings to the steep side of a mountain overlooking the sea; from the winding road that approaches it the first view of blue-walled houses, all with red tile roofs, is breath taking.

Lefkara's streets are paved with cobblestones and so narrow that our little car nearly touched the houses on each side. As we passed sunny courtyards we saw groups of girls and women, ranging in age from eight to eighty, busily plying needles. In outdoor coffee shops sat their menfolk, exchanging local gossip and sipping Turkish coffee.

Men of Lefkara were famous travelers, Renos told us. Once they journeyed all over the world, selling their wives' handwork. Now a local guild handles the sales, and the men have little to do. The women, however, keep as busy as ever.

Kings and emperors have eaten banquets set on tablecloths made in this little village. Tradition says that Leonardo da Vinci, visiting the island in the 15th century, took home a piece of Lefkara lace and presented it to Milan Cathedral for use as an altar cloth.

We spent the night in a tiny hotel with a single guest room. After supper a townsman called, introduced himself as the secretary of the lace-vendors' guild, and asked if he could help us.

"I'd like a picture of the best lacemaker in the village," I said. "I imagine she'll be one of the older women. I'd also like to photograph the prettiest girl in Lefkara, and an attractive child working on lace. Could you arrange it?"

"Come to my house at 9 in the morning," he said. "They will be there."

We kept the appointment and took the pictures. When we were through I thanked him for making the arrangements.

All in the Family

"It must have been a bother," I said, "to round up the best lacemaker, the prettiest girl and the most attractive child in the village."

"Not at all," he said. "The best lacemaker in Lefkara is my mother, the prettiest girl in town is my wife, and the most attractive child in the village is my daughter!"

Before returning to Nicosia we drove to the sand-covered ruins of Salamis. A thousand years before Christ, a prosperous city stood here, its seaport one of the busiest in the ancient world, its market place famous for the size and beauty of its buildings and [illegible]

For hundreds of years the city was the capital of Cyprus but earthquake, war, and revolts left it a mass of ruins. Much of its stone went to build the modern city of Famagusta. Only broken marble columns, half covered by shifting sands, mark the site of its former glory.

In Nicosia we made arrangements for our last excursion on the island. Twenty-four years ago, in 1928, Dr. Maynard Owen Williams wrote a story of Cyprus for the NATIONAL GEOGRAPHIC MAGAZINE.* In it he told of Hélène, a beautiful 12-year-old Greek girl who lived on the Karpas Peninsula in the island's northeast corner.

Sentimental Journey

"Let's find Hélène," Jean suggested, "and compare her life today with that which Dr. Williams described. She'll be a woman now, of course, but we can see how her home and way of life differ from those of her mother, about whom he wrote."

During our own visit, we had been continually astonished at how little change there had been in the people's habits and customs as described by Dr. Williams. The cities were more modern, it was true, but in the country and villages we had found his descriptions as fresh and accurate as if they had been written yesterday.

We hoped to make the drive to Rizokarpaso in a morning, but there are too many attractions in Cyprus for fast travel. In the village of Yialousa we found a family unwinding silk from silkworm cocoons, and stopped to watch them at work. They showed us how the cocoons were boiled, then stripped of their coarse filaments (page 642).

Locating Hélène might be an almost hopeless task we thought, but we underestimated the local fame her picture in the NATIONAL GEOGRAPHIC MAGAZINE had brought her. In the market place of Rizokarpaso, Renos explained our mission to a group of men [illegible] in front of a coffee house.

Hélène? She who had been pictured in the American magazine? Of course! *Everyone* knew Hélène. Directions followed, and in a few minutes we stopped in front of a low stone house near the edge of the village.

A tall, handsome woman of middle age came to the gate. Renos explained our mission. For a moment she looked startled, then giggled like a girl, her face covered by a sudden blush.

In a torrent of Greek she welcomed us, led us inside her spotless one-room house, and offered us chairs. Hurrying to a cupboard, she drew out a worn copy of the NATIONAL GEOGRAPHIC MAGAZINE bound in heavy wrapping paper and opened it to the picture taken 24 years ago. She was Hélène.

Seven children, hard work in field and home, and time had worked their changes (page 644). But Hélène's face was still warm and strong

* "Unspoiled Cyprus," July, 1928.

Immigrant and Children, a Week's Supply of Bread Comes out of a Turkey and Oven

[illegible]

and intelligent, and her delight when Renos told her why we had come seemed to take ten years from her age.

Tenderly Hélène fingered her copy of the old magazine. She looked at the picture of herself, young, slim, dressed in a colorful Cypriote costume and surrounded by brilliant poppies. Then she looked down at herself, and at her tiny room, with resignation.

Quickly her animation returned as she told us of the local fame the article had brought her, and she laughed as she compared herself with the picture. She told us we were lucky to have come the day we did. Six days a week she works in the fields with her husband. Today she had stayed home to bake a week's supply of bread.

The mention of baking brought a startled look to her face, and she dashed out the back door. We followed, and found her peering anxiously into the little door of a beehive-shaped oven.

Looking in, we saw the six-foot circle of the oven floor covered with golden-brown loaves of bread. There were two dozen large plain loaves and thirty or more twisted, coiled, and braided shapes (page 655).

Hélène looked relieved to find her baking safe, drew a sesame-covered loaf from the oven, and took it inside for us to share.

Her eldest son, 18, had emigrated to Australia, she said. The other two boys and her four daughters live at home. The oldest is 19, the youngest a little more than a year.

"They are being raised as I was," she said, "to hard work and a simple life. In our village, life has not changed. This was my mother's house, her furniture. These loaves are baked as she baked them, and we till the same fields in the same way. Life is just as it was when Dr. Williams visited us."

Picture Brought Marriage Proposal

"That story he wrote nearly got me in trouble," she laughed. "Five years after it was published, a year after I was married, a letter came from a young man in America. He said he had fallen in love with my picture, and if I were free he would come and marry me.

Did she still have the letter?

"Ah, no. My husband was furious. He tore it up in little pieces and burned them!"

When it was time for us to leave, Jean gave Hélène the silk scarves we had brought her, and candy for the children. She thanked us and gravely wrapped two loaves of bread, still warm, in a homespun napkin and presented them to us. As we walked to the car she plucked two carnations from her garden and handed one to each of us.

"We have our answer," said Jean as we drove away. "Life here hasn't changed a bit. And if the Hélènes of Cyprus are wise, it won't."

In Yialousa we found the silkworkers' home, a whitewashed stone cottage set on a hillside. We were greeted by the family's 22-year-old daughter, who invited us into the cozy single room and offered us the traditional Cypriote refreshment of preserved fruit and a glass of water (page 633).

Our hostess was not in the least embarrassed by the fact that there were not enough forks to go around. She waited until those served first were finished, then washed the forks and offered them to the others.

Brides Furnish Linens for a Lifetime

She showed us heavy bolts of hand-woven silks and a huge chest at one end of the room, her own hope chest. A Cypriote bride, she told us, tries to bring her husband enough cloth to last out their years together—all the sheets, household linens, and materials for her own and her family's clothing. The material was beautiful; the embroidery and other handwork exquisite.

As we chatted we gazed through the open doorway at a rural scene of rare beauty, mountains, olive trees, golden fields of grain, flocks of sheep, and the blue sea in the background. We were thinking what a wonderful life was hers when suddenly she told us that she planned to emigrate to England and seek work as a chambermaid.

"There is nothing here for me," she said. "I am 22 and will have a reasonable dowry, but there is no one here for me to marry. Both my brothers have emigrated, so there is no one with whom I can attend public affairs. Most of the young men have gone abroad. A girl must marry, and now there is no hope of that here. So I must go abroad."

Hélène's son gone to Australia; now this girl going to London. . . . Much of the story of Cyprus had been told in those two examples.

It is a story of people struggling to keep their own peaceful way of life but subjected to forces greater than they can resist. Yet, in village and farm, they have kept the simple virtues—frugality, hard work, honesty, and hospitality—which make the island such an idyllic place.

Whenever I think of Cyprus I like to remember an incident that happened when we visited Roxandra, the woman of Pitsi. I tried to pay her for our lunch, but she refused.

"You should be careful," I joked. "The National Geographic Society has 2,000,000 members, and if I write that you give lunches free, they may all come and visit you."

She smiled, and threw her arms wide.

"But they would be welcome!" she said.

A British Paratrooper, He Croups Behind Walls Where Fighters of the Doomed Armies

Minaret and Belfry Lips East and West, Moslem and Christian

[illegible]

A Crusader's Castle Overhangs Kyrenia Harbor

In the foreground [illegible]

Pennants Flutter for Boat Races Outside Kyrenia's Sea Wall

[illegible]

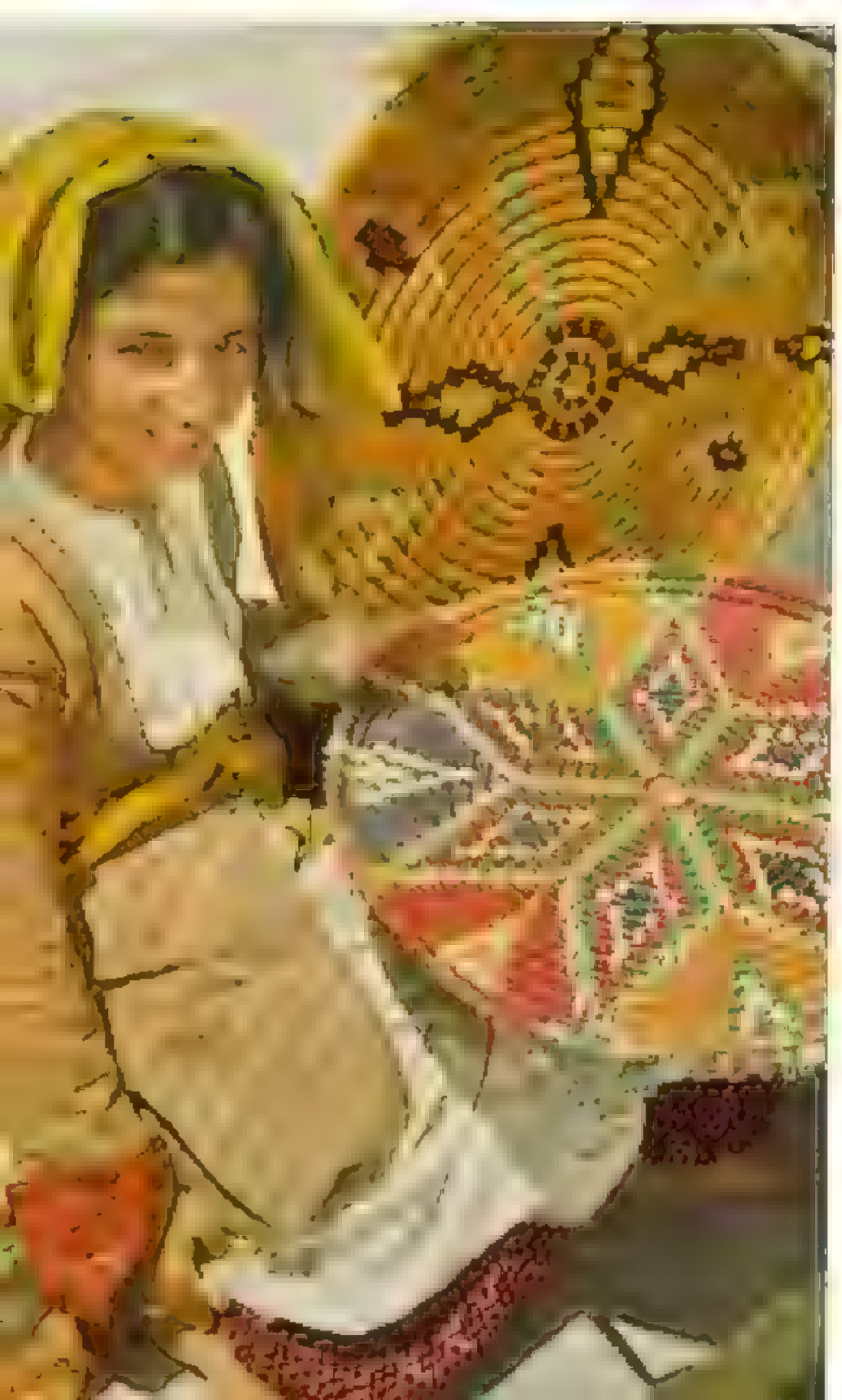
▲ British Paratroops Occupied the Castle During the Iranian Old Crisis

[illegible]

▼ Scottish Pipes Skirl on a Rampart Built for Knights in Malt

[illegible]

Spring Flowers Dash Among Tempestuous, the Long Bone Finger Cypress Plants at Asia Minor



Yesterday, Emery Garbs the Steward and Gallery Cabot

[illegible]

[illegible]

[illegible]

[illegible]

Helen Hayes Has Grown from the Marcus Pictured Here 24 Years Later

[illegible]

Nature's Tank, the Turtle

This Leisurely Armored Reptile Takes Everything in Its Slow Stride but the Automobile

By Doris M. Cochran

Associate Curator, Division of Reptiles and Amphibians, U. S. National Museum

ON a warm day in late spring you are strolling along a narrow stream. Near the bank is a half-submerged log on which are scattered half a dozen dark, rounded knobs.

As you approach, these knobs detach themselves, slide into the water, and swim away. You have just disturbed a group of fresh-water turtles basking in the sun.

Or you are weeding the tomato bed after a summer rain—and suddenly a hump of dirt at your feet rises and waddles off.

The muddy coating all but hides the yellow and black shell of a box turtle. You see his bright eye cocked at you before he disappears under the deeper foliage of your lettuce patch.

Again, you are cutting early roses when you notice a slight commotion in the loose soil near the roots. As you watch, a tiny clawed hand appears, and then another, waging a life-and-death struggle against the small pebbles and loam.

Finally a baby turtle lifts himself free of the encumbering earth, pauses a moment to blink at his first bright look at the day, then instinctively seeks cover under the nearest leaf or bit of bark.

In the Turtle's Grass-roots World

Except for such casual contacts as these, the one who wears his house on his back is not too well known to many of us. Let us, therefore, enter in imagination the world of the grass roots and observe a box turtle (page 676) for an entire day.

The morning has been cool, for it is early June, but as the sun rises higher the heat increases. Under a loose covering of oak leaves where she burrowed the night before, a female box turtle feels in her muscles the growing warmth of the climbing sun. Soon she is able to shoulder through the leaves to a sunlit spot.

Cold acts as a paralyzing agent on turtles and all other reptiles. Body heat of these "cold-blooded" creatures varies with that of their surroundings, instead of being regulated to stay at a fixed high temperature, as in mammals and birds. If you find a turtle early in the morning when the air is cool, you will notice that its skin is cold to the touch, its movements slow and lethargic.

After warming up a while in the sun, Madame Turtle begins to think about lunch. She spies a few mushrooms and takes several bites.

A turtle has no teeth, so cannot chew. But the edges of the jaws are sharp and covered with heavy, horny tissue. The lower jaw fits closely inside the upper one. Their closing shears off a bite of food, which is then swallowed whole.

As our turtle pushes on through the leaves, she uncovers some earthworms and devours them greedily.

At a spring she takes a drink, for turtles are thirsty creatures. She wades right in, and, when partly submerged, stretches out her neck and slightly opens her mouth, letting the water pour in. The throat may be seen to expand and contract as the muscles carry the fluid into her stomach.

After drinking a few spoonfuls, the turtle heaves herself out of the water; she suddenly has something else on her mind. In some hazy cell of her slow-moving reptilian brain there may lurk a blurred memory of her somewhat less than tempestuous love affair of the past summer.

A handsome yellow male turtle with bright red eyes had met her feeding on a grassy hillside when the mating instinct was at its peak. At first he had merely followed her as she moved through the grass; then he had begun to make little bites at her neck and legs to stop her, putting his forefeet on her back.

After mating, the two had wandered apart. From the scene of her brief romance, she had resumed her hunt for food.

Spring Ends a Deathlike Sleep

All winter she had hibernated in the ground under a tree, having buried herself several inches deep in the soft leaf mold, well below the frost line. Respiration had almost ceased during her long sleep; her metabolism slowed nearly to a standstill, and for six months, while snow and ice covered the earth above her, she neither ate nor moved, and seemed as if dead.

The warm rains of April penetrated to her sleeping place, and one day when the sun had lain with particular warmth on her coverlet of leaves, she hoisted herself out of her trench.

During the winter hibernation, the eggs which she carried had barely continued to grow, but as she fed ravenously in these first

[illegible]

"On Your Mark, Get Set, Go!" Box Turtles Prepare to Race Off in Any Direction

[illegible] Washington [illegible]

warm days of spring, they resumed their full growth within her body. Now the [illegible] tells the urge to rid herself of this burden.

After some searching, she finally selects an area between the long roots of a [illegible] where [illegible] during part of each day.

Crouched and bracing [illegible] her hind feet, the turtle begins to push the soil away. She digs first with one foot, then with the other, turning the sharp-edged side of the foot outward to scoop dirt from the hole.

It is a long task, demanding great patience, and dusk is falling before the hole is as deep as the turtle's hind legs can reach—about two inches.

Fertile Turtle Lays Her Eggs

Finally the great moment of the egg-laying. One by one they are dropped into the nest at intervals of several minutes. After each egg falls, one of the hind feet [illegible] moves it toward [illegible] the hole to leave room for those to follow.

When six have been laid—seven, because this is a large, well-grown female, was probably nearly the maximum number—she reverses the action of her digging, and [illegible] hole, packing the dirt securely over the eggs.

All this has been done by touch alone, for the turtle has not looked at her eggs or nest. Now, however, she turns as if to inspect her work. She tramples over the nest several times to disguise its outlines. Then she walks away, her maternal duties ended.

The eggs are at the mercy of any marauder. Skunks, snakes, bears and raccoons [illegible] them.

If the mother buries her eggs late in the summer and does not dig deep enough, the cold winter may kill the developing embryos. But since this particular clutch of eggs was laid in late spring, the young turtles may hatch before the cold weather arrives.

The period of incubation for turtle eggs depends upon the temperature. Usually eggs hatch in early [illegible] until September if the weather remains warm. But a late spring or an early fall may not give the eggs sufficient warmth for complete development. Then they may remain in the ground all winter, the young emerging in the warm days of the following spring.

A box turtle's egg is elliptical, white, about one and a quarter inches long by three-quarters of an inch in diameter, with a tough [illegible]

ery shell which can be dented but not torn easily when recently laid. As incubation proceeds, the egg rapidly absorbs water. The shell is distended and finally ruptured by this rapid water absorption, aided by the young turtle's kicking legs.

[illegible] the turtle uses the sharp claws on its forefeet to widen the hole in its prison wall.

A Ready-eyed Baby Meets the World

Now comes the greatest struggle of all. The tiny, newly hatched creature, weighing only a fraction of an ounce, must force its way upward through several inches of close-packed soil and drifting leaves.

Let us assume that the struggle is successful. A fine beady-eyed baby turtle as large around as a 25-cent piece emerges.

The youngster pushes his way manfully over straws and sticks to a quiet hiding place under a piece of bark, where he can accustom himself to this big new world of his. There he stays for several days, until the egg yolk stored as food in his little body is exhausted and the soft suture on his lower shell, through which the yolk once nourished him, is hardened (page 670).

The first food of this young box turtle and his brothers and sisters probably will be small earthworms. As the youngsters grow, they may sample a fallen blackberry, a slug, a piece of green clover, a toadstool, or even a dead field mouse, for box turtles are practically omnivorous.

Instinct tells the young turtles that in turn they would make a good meal for almost any carnivorous animal. Accordingly, they hide all during their early life; seldom can they be found without very careful searching in the underbrush.

By the end of five years, the turtle has a shell length of about five inches and is mature. By this time he has become relatively fearless because of the strong fortress provided by his shell.

The box turtle's lower shell is hinged across the center and has powerful closing muscles fore and aft. When its owner is attacked by some hungry animal, he can draw his head, arms, and legs completely inside, close the lower part tightly against the upper shell, and withstand siege until the attacker tires.

During strawberry time, the turtle gorges on fresh fruit and often becomes so fat that he cannot completely close his shell, no matter how much you may tickle him. If a wolf had him, instead of a friendly human, he might pay for his greediness with his life.

The shell of the box turtle and certain other Temperate Zone species serves also as a record of growth, at least in early years.

When box turtles are hatched, each has 15 squarish plates arranged in three rows on the upper shell, or carapace, bordered by 25 smaller marginal ones. Growth takes place around the edges of these plates.

The cessation of growth caused by winter's hibernation is marked around every plate by an encircling depression. Counting the deepest "rings," or channels of growth, from the center to the margin of any scale, gives the turtle's age.

Occasionally in summers of severe drought, turtles are forced to estivate—bury themselves in the mud at the bottom of a pond or ditch until the welcome rains come again. If the drought lasts long, the turtle fasts, growth stops, and a ring is formed on the scales of the shell.

The summer ring is seldom as deep as the winter one, however, since the drought forced resting period is usually much shorter than the all-winter hibernation.

Growth takes place also on the margins of the lower shell, or plastron, but since these margins become worn by the turtle's travels, the rings seldom are complete there.

Turtles continue to grow after reaching maturity, although at a slower rate.

As a result of crawling under things, a very old turtle is often worn as smooth above as below; so its age can only be guessed. Eighty years is believed to be a ripe old age for a box turtle, although some authorities think they may exceed the century mark!

Lunch at the Cafeteria

Box turtles have a well-established itinerary over the few acres they select for their home. This has been ingeniously demonstrated by attaching a spool of thread to the turtle's back with a little harness, fastening the free end of the thread, and following the trail as it unwinds.

Captive box turtles soon learn a feeding routine. I once kept pet turtles in an enclosed court in the United States National Museum at Washington, D. C., feeding them fruit, tomatoes, and bread every noon. Although the natural plant growth of the grassy enclosure provided adequate food, it was not long before [illegible] near the flat stone where I spread their tidbits.

If I happened to be a few minutes early, I could see my turtles coming to the picnic through the grass from all directions. One can imagine their philosophic resignation on Sundays when the office was closed and no lunch appeared!

Box turtles are accustomed to climbing over rocky or uneven ground, and so have learned to avoid tumbles. If you place one on a table top, it will walk to the edge but will not go

Diamondbacks Terrapins Forget of Pets for New Years. Stew Made from Their Meat May Sell at $3.50 on Eggbounce Bowl

Baby Turtles Have the World Complete with Runners for Several Days

The [illegible] turtle [illegible] the [illegible] space [illegible] after [illegible] can hatched [illegible] slightly smaller [illegible] a golf ball [illegible]

over. A water turtle, on the other hand, will launch itself from the edge without hesitation, being used to sliding off a mud bank into the soft buoyant [illegible] water.

[illegible] turtles have no external ears, but "hear" by feeling even the slightest vibrations through ground or water. Their sight is so good that it is hard to approach one without being seen. They have some sense of smell and taste, but further experiment is needed to gauge the precise extent.

A question frequently asked is whether "turtle," "tortoise," and "terrapin" mean the same thing. The answer is that it depends upon where you are.

In the United States [illegible] correct to call any turtle a turtle, but we often refer to the edible fresh-water kinds sold in markets as "terrapin," while the land turtle with stump-shaped, bird feet may be called a "tortoise." British usage differs somewhat.

Scientists have given each one of the more than 300 living kinds of turtles its own scientific name. The common box turtle, for example, is *Terrapene* [illegible].

Pet stores stock the young of many of our commoner pond turtles and sell them for aquariums. A healthy turtle will soon accept food from its owner's fingers. A varied diet, including small pieces of raw meat and [illegible], insects, water plants, vegetables, and fruits, should be provided.

[illegible] the turtle uses its [illegible] front feet to tear off a piece small enough to swallow. Most aquatic turtles prefer to feed under water.

The turtle's home may be a deep pan, a tub, or a glass-sided aquarium. The main requirement is two or three inches of water with a sandy island or a smooth sloping rock onto which the turtle may climb.

Turtles Need Their Cod-liver Oil

A daily drop of cod-liver oil in the food, or dropped directly into the [illegible] helps to prevent the vitamin deficiency [illegible] affect a captive turtle in winter. [illegible] are swelling eyelids, softening of the shell, and lack of interest in food. Bathing [illegible] daily with boric acid reduces swelling.

In combating this deficiency disease, it is helpful to keep the turtle out of dry soil most of the time, with a few short swims during the day, and to provide sunbaths, being careful to offer shelter in case he gets too much sun.

Some pet dealers smear the shell of the baby turtle with bright enamel and often paint it with flowers! This means deformity or death to the turtle unless the paint is removed, since the shell cannot grow. The paint should be [illegible] softened and removed with nail-polish remover.

Of the box turtles, the Florida type (*Terrapene bauri*) has a [illegible] shell than the common variety (pages [illegible] and 677). Its black shell has a handsome starlike pattern of yellow lines radiating from the center of each scale. It is found wild in peninsular Florida and seems to prefer being near the water.

Blanding's turtle (*Emydoidea blandingii*) is grouped with the box turtles because [illegible]

A Sheep Dog Would Think Twice Before Barking at This Box Turtle's Ancestor

[illegible] ous period, swam was flat [illegible] Not [illegible] or le three feet tal, roamed [illegible] the eastern and central United States

[illegible] hinged lower shell. The upper jaw [illegible] beak, but the lower jaw [illegible] is [illegible] whereas the [illegible] turtles have [illegible] and legs are [illegible] from the shell.

The Blanding's lives in ponds and marshes in the north-central States, east to Ontario, Ohio, and northwestern Pennsylvania. At [illegible] though timid when first taken, it readily adapts to captivity. It is one of the least aggressive of turtles and seldom bites, even when teased.

One of our [illegible] species is Innes's turtle (*Clemmys insculpta*) [illegible] the upper [illegible] and Delaware River. The side of the head and neck bears a [illegible] stream of [illegible] yellow [illegible] (75).

The young Innes's shell is [illegible] the adult's [illegible] without shell pattern in the [illegible], light brown [illegible] fishgray with [illegible] and stale in the female. The red [illegible] on the neck remain throughout life.

Nose-tickling Courtship

When they are about seven inches long, Innes's turtles are mature enough to breed. Their courtship is [illegible]. The [illegible] the long nails on his hind feet [illegible] the [illegible] a second or two. He repeats this stroking [illegible] at short intervals.

Although the female [illegible] disinterested at these antics, [illegible] acceptance and mating takes place.

Since water turtles shed the outer layer of the shell as they grow, there is no definite way of telling the age of wild-caught adults.

The best clue to telling the sexes apart is the fact that male water turtles have a longer tail and, in most species, proportionately larger hindpads than the female.

The Florida turtle (*Pseudemys floridana*) is a larger and less colorful relative of the Cooter's. It reaches a total length of 17 inches and has black and yellow lines on the neck. It abounds in lakes, rivers, large springs, and streams from North Carolina and Florida to Mississippi.

Bears, raccoons, and many other animals, including man himself, dig in the sandy [illegible] where these turtles lay their eggs, hoping to devour them.

The gold-bellied turtle (*Pseudemys rubriventris*) is still larger than the [illegible] species. [illegible] Dorsal [illegible] yellow, [illegible] Blanding's turtles. [illegible] [illegible] (*Pseudemys scripta*), native from

Virginia to northern Florida and southeastern Alabama (page 675).

Although somewhat like the young Troost's turtle, this handsome fellow has a wide yellow patch behind the eye and lacks the red color on the neck, which is striped with yellow and black. The adult has a shell nearly eleven inches long and may weigh eight and a half pounds.

The omnivorous appetite of the yellow-bellied makes it easy to keep as a pet. It seems to be a scavenger, for it is one of the few turtles which have increased in number in spite of pollution of rivers by sewage.

The most widely distributed turtles in the United States are the painted turtles of the genus *Chrysemys*; one or another of the four recognized varieties is known in practically every State east of the Rocky Mountains.

The western painted turtle (*Chrysemys bellii bellii*) is the largest member of its group; on record is one with a carapace nearly ten inches long. The margins of its lustrous blue-black shell are handsomely marked with red and yellow concentric rings.

The western painted is known to have lived more than ten years in captivity. Usually it will accept food from one's hands, but prefers to swallow it under water.

For the eastern painted turtle (*Chrysemys picta picta*) seven inches seems to be the maximum shell length (opposite page). It inhabits the Atlantic Coastal Plain from Long Island, New York, to Jacksonville, Florida, and can endure the brackish tidal water in marshes near the ocean.

The central painted turtle (*Chrysemys bellii marginata*) also makes a long-lived pet (page 675). It readily accepts meal worms, earthworms, raw fish, and meat, as well as tender vegetables, if placed in the water beside it.

Smallest of the four is the southern painted turtle (*Chrysemys picta dorsalis*).

The Diamondback a Delicacy

Diamondback turtles (genus *Malaclemys*) dwell along our coasts from Massachusetts to Texas and are economically important, as well as being among our handsomest species. The upper shell is deeply etched by growth rings and has a central keel running down the back. The shell resembles fine carving.

Because the adult's flesh is a highly esteemed delicacy, turtle hatcheries were established early in this century near Chesapeake Bay, and later at Beaufort, North Carolina (pages 668 and 669). Turtles of breeding size are kept in pens until eggs are laid—seven to 23 in a clutch, averaging around twelve per female. Eggs are then transferred to hatching boxes until the young emerge.

Newly hatched young are just over an inch long and light olive to dark brown in color, with black concentric lines within the scales. Often their wide upper "lip"—the margin of the upper jaw—is paler than the rest of the head, giving them a clownish look.

Winter-fed young in captivity grow during the time when they would normally hibernate and accordingly are bigger and more vigorous than those that sleep the winter away.

Females are ready to breed when they reach a length of five and a half inches, usually at the age of five, but often much later.

The maximum size of the Carolina variety is slightly over seven inches. Since the males seldom exceed five inches, they are of little commercial importance.

The northern diamondback (*Malaclemys terrapin concentrica*) inhabits the Atlantic coast from Cape Cod to Cape Hatteras (opposite page). There it intergrades with the closely related southern form.

Lazy Turtles Sun in Layers

The common map turtle (*Graptemys geographica*) is known all the way from the St. Lawrence River and the southern shores of the Great Lakes down the Mississippi Valley to Missouri, Kentucky, and Arkansas (opposite page). Shell markings like map contour lines account for its name. It is exceedingly wary, and takes quickly to the deepest part of the stream if alarmed.

On sunny days hordes of these turtles may be seen sunning themselves on rock ledges, mud banks, or logs. Sometimes they pile up two or three deep, the lowest layer apparently not objecting to being crawled over.

A map turtle at rest is one of the laziest sights imaginable. Its hind feet stick out straight backward, and the forefeet are equally relaxed in front, one of them sometimes pillowing the heavy head.

In addition to a sharp cutting edge, the jaws of map turtles are provided with wide crushing surfaces, so that adults can get at the soft parts of large mollusks such as clams. Crayfish and aquatic insects are also devoured.

The Mississippi map turtle (*Graptemys pseudogeographica*) is another of the clown-faced turtles. Here, however, the decoration is a sinuous yellow half-circle on the side of the head behind the eye, plus numerous wavy light markings on jaw and neck (page 675).

The central scales of the upper shell are curiously keeled and pointed posteriorly, while the marginal shields suggest the fluted carvings of some oriental master. Ten inches seems to be the maximum length attained by adult females. Weight runs up to four pounds.

In northern Illinois this turtle's favorite places for hibernation are muskrat houses.

Eastern Painted Turtles, Ready to Dive Out of Danger, Hope Long as Their Solution

Map Turtle climbs the Lake and Northern Diamondback [illegible] **Eastern Painted** [illegible]

Because Their Blood Absorbs Oxygen Very Slowly, Turtles Can Stay Submerged for Hours on a Couple of Air

Spotted vs. Musk Turtles [illegible] the Mud Turtle, [illegible]

Turtles Listen Well for External Jaws; Sensitive Skins Catch Vibrations from Water or Ground. All Love Nice Clean in Pet Shops

Young Yellow-bellied [illegible] Central Painted Turtles [illegible] Baby Red-bellied, Troost's [illegible] Mississippi Map Turtles [illegible]

A Wood Turtle (Clemmys) and a Blanding's Turtle Uninvited to Share a Box Turtle's Strawberry Dinner

Deserts Hold Water for Those Who Know Where to Look. Florida Box Turtles (Left) Get Theirs from Prickly Pears

Gopher Tortoise

Alligator Snapper's Pale Tongue Moving Like an Earthworm on a Hook, Presumably Lures Fish Within Snapping Distance

Species: Spiny Softshell [illegible] Common Snapper [illegible]

Marine Turtles Keep a Wary Eye for Sharks. They Need Size to Survive in Their Predatory World

Leatherback, Green, Hawksbill.

Sensible Desert Tortoises Venture Out in Midday Sun Only on Mild Days

[illegible] to regulate their blood heat, cannot endure high temperatures tolerated by mammals [illegible] **Desert Tortoise** [illegible]

its food habits undergo a great change during growth. Newly hatched young are mostly carnivorous, feeding on small snails, insect larvae, and worms. The adult is chiefly herbivorous, dining on the roots, stems, and leaves of aquatic plants, with an occasional crayfish or other nonvegetarian delicacy.

Among the commonest of turtles found east of the Mississippi is the musk turtle (*Sternothaerus odoratus*), which ranges as far north as southeastern Canada (page 674). Dwelling in muddy ditches, streams, and lakes, the musk turtle crawls over the mud, hunting worms, insects, mollusks, crayfish, minnows, and tadpoles. It is scarcely over five inches long and weighs barely half a pound.

The lower shell is small compared with that of most water turtles, leaving much more of the bases of arms and legs exposed. Perhaps this turtle's bad temper and readiness to bite compensate for its lack of bony protection. Its life expectancy as a pet is good, one having lived 23 years in captivity.

Nesting habits of the musk are more irregular than those of most other turtles. Sometimes the eggs are laid on the bare ground and left uncovered; often they are deposited under a log or on top of a stump. A single female lays two to seven eggs, but many more are often found close together, for these turtles tend to be gregarious at nesting time.

The baby musk turtle looks like a mechanical toy as it kicks with its tiny feet trying to escape from your fingers. Its shell, high and ridged, is minutely and delicately formed, though never brightly colored. As growth progresses, the shell flattens and widens, losing its miniature beauty.

His Name Is Mud

The common mud turtle (*Kinosternon subrubrum*) is related to the musk, but is usually less aggressive. Where their ranges overlap, they are frequently found together in the same pond (page 674).

The mud turtle is found from Connecticut along the coastal plain to Florida and inland; close relatives live in Alabama, all the Gulf States, and north to Missouri.

Mud turtle hatchlings are brown, attractively spotted with yellow on the neck and along the sides of the shell. As pets they readily accept earthworms and finely chopped meat. Very alert, they swim about the aquarium as if propelled by a wound-up spring. They live a long time in captivity (18 years in one instance).

A full-grown mud turtle measures only a trifle over four inches in length. The lower shell, or plastron, is much wider than that of the musk turtle and protects the soft parts of the body much better.

Both mud and musk turtles have hinged plastrons, which enable them to close the shell partially, somewhat in the manner of the box turtle (page 667).

Food preferences of the mud turtle in the wild state have scarcely been investigated, while its reproductive habits are known from only a few scattered observations. Its musky odor prevents its use as food by human beings.

The spotted turtle (*Clemmys guttata*), very common in the eastern United States and readily found in sluggish streams, bogs, and ditches, likewise needs study, especially as to its hibernating habits in different regions (page 674). Thus far the earliest record for its appearance is March 2, in southeastern New York State, and it apparently remains active until November.

It is surprising to note how many descriptions of some of our commonest reptiles conclude with the words, "Nothing is known about its habits." Turtle study could well become a project for amateur biology students of all ages.

Voice of the Turtle

The wood turtle (*Clemmys insculpta*) roams woods, fields, and swamps from Maine to West Virginia (page 676). Though it eats almost anything, it prefers berries, fallen fruit, tender plants, and mushrooms. It makes an intelligent pet and is surprisingly agile; it can climb out of a shallow box with ease.

Although the voices of most turtles are at most a slight squeak or sigh, the wood turtle makes a whistling call audible thirty or forty feet away.

The part of our country lying west of the Rocky Mountains is much less rich in turtle species than the central and eastern parts. The Pacific pond turtle (*Clemmys marmorata*), found from southern California to Oregon, is the only fresh-water turtle native to our west coast. In spite of extensive trapping for its delicious meat, this species remains fairly abundant.

The desert tortoise (*Gopherus agassizii*) lives in the desert regions of southeastern California and in parts of Nevada, Utah, Arizona, and northern Mexico. Its thick shell and the heavy overlapping scales on the outer side of its arms and legs make it almost impervious to attack (opposite page).

The upper shell of a large male is about thirteen inches long, nearly hemispherical in shape, and sculptured attractively with growth channels paralleling the outlines of each scale.

Like the box turtle, the desert tortoise displays a great deal of "sense" in captivity. He soon learns to get his food in a certain

Green Turtle, Caught off Australia, Promises a Feast

[illegible] Arnhem Land captor grins at the prospect of [illegible] the hunter hails himself and roped harpoon [illegible] spear with barb in neck or shell, the harpoon [illegible] boat. The turtle towed the canoe [illegible]

place, if it is put there each day. One I kept in my office had a definite itinerary [illegible] nearly every day during warm weather.

A Busy Day at the Office

In the early morning he was usually found in a corner between the file case and the wall. About 10 o'clock he took a stroll and ended up under a kneehole desk.

Lunchtime found my office tortoise warming at a piece of oilcloth on which I served [illegible] cantaloupe and lettuce. About 3 [illegible] he had gone early to bed in his corner next to the file case.

He enjoyed having his neck scratched and when I filled a [illegible] bowl of water and put him in it to drink, he grazed happily for half an hour at a time.

As winter approached, he became more sluggish and appeared to want to hibernate. He was put into a wooden tub partly filled with sandy soil and soon burrowed into it.

I kept this tub in the [illegible] corner of my office, and there the [illegible] slept and spring. Then he emerged [illegible] his [illegible] little dustier, but [illegible] as ever, and quite ready to eat his breakfast.

A close relative of the desert tortoise is the gopher tortoise (*Gopherus polyphemus*), found from southwestern South Carolina to central Florida and westward to Texas (page 675).

A shell length of 12 inches and a weight of 10 pounds are considered the maximum for this turtle. It burrows into sandy soil, often [illegible] dozens of feet, returning each night to its own tunnel after having spent the day foraging for fruit and succulent plants.

Razor-jawed Soft-shells and Snappers

Of all North American fresh-water turtles, the soft-shelled and the snapping turtles are the only truly ferocious ones.

The soft-shells (genus *Trionyx*) have flattened, rubbery shells, the margins of which are leathery and soft; hence the popular name. They seldom go far from water voluntarily, except when the female pulls [illegible] on dry land, perhaps in midstream, to deposit her eggs.

The soft-shell's snout ends in a piglike nose with a double nostril which close when it submerges. It can stay under water [illegible] hours, being specially adapted [illegible] oxygen from water through the lining of the pharynx.

With [illegible] teeth, it will feed [illegible] among fish. It [illegible] snails, and mussels, and has [illegible] of human beings who [illegible] it.

The large northern soft-shelled turtle may have a shell [illegible] than 18 inches long and weigh over 34 pounds.

The spiny soft-shell [illegible] with a shell length not exceeding 14 inches [illegible] 6789. [illegible] the water line; there it [illegible] 12 to 25 [illegible] in June or July.

The common snapping turtle (*Chelydra serpentina*) and its [illegible] relative, the alligator snapper (*Macrochelys temminckii*), are even more destructive (page [illegible]). Adept at catch-

Like Oaks from Acorns, Galapagos Giants from Little Texas Grass

[illegible]

[illegible]

A Walking Meat Cleaver

[illegible]

Siamese Sue Proves that Two Heads Are Not Always Better than One

[illegible] Fish and Wildlife Service Aquarium, Washington, D. C. [illegible] escape their natural enemies for long [illegible]

The [illegible] turtle [illegible] for its [illegible] (see pages [illegible] and [illegible]). [illegible] into [illegible] shallow water [illegible] to the surface. [illegible] a [illegible] on its back [illegible]

The [illegible] *[illegible]* [illegible] This [illegible] golden yellow and [illegible] brown.

Modern Pace Too Fast for Turtles

Turtles represent an ancient and [illegible] lineage. Their fossil [illegible] are found in rocks at least 175,000,000 years old.

One of the largest fossil land turtles on record was dug out of rocks in northern India. It measured seven feet in length and three feet in height.

[illegible], during the Age of Reptiles, turtles [illegible] over the whole world except in the [illegible] regions. Cold was apparently their only enemy. Their descendants are found today on every continent and in almost every region not subject to [illegible] winter.

The turtle has a considerable niche in [illegible] and folklore. Many Asian people believe that the earth itself rests on the back of a turtle.

Ceremonial rattles made of dried [illegible] shells [illegible] with pebbles figure in the rites [illegible] of the Indians of our [illegible] Southwest.

Inoffensive and valuable [illegible], turtles [illegible] their [illegible].

Turtles, on the whole, are slow people, but like many other slow people, they cannot quite keep [illegible] with our swift modern life, especially on the highways. [illegible], their [illegible] in the center of a paved road [illegible] attraction to turtles who wish to bask in the [illegible]

The next time you see one of these harmless but old-fashioned [illegible] attempting to cross the road in front of your car, slow up, if you please, and spare his life.

[illegible] the National Geographic Magazine [illegible] National Geographic Magazine, January, [illegible]

Thumbs Up Round the North Sea's Rim

Northern Europe Shows Its Human Side to Two Girl Hitchhikers Touring Youth Hostels from Sweden to France

By Frances James

With Illustrations from Photographs by Erica Koch

AT MIDNIGHT, just 22 hours out of Esbjerg, Denmark, the refrigerated fish truck reached the German-Dutch frontier. Its two drivers, stopping to change a leaky tire, grinned at seven youthful hitchhikers emerging from an incredibly tiny and bulging roadside tent.

But the hitchers in turn had cause to grin when they beheld, crawling stiffly from a narrow shelf behind the driver's seat, the astonishing spectacle of—Erica and me!

My whole body was numb from the day and night of relentless highballing across Germany, and Erica felt about the same.

But, looking back, we agree that the 550-mile "hitch" from Esbjerg to Brussels (Bruxelles), sandwiched between two Danes and our rucksacks, an overheated engine, and 15 tons of iced shellfish in truck and trailer, was something we wouldn't have missed. It was a typical part of our thumbs-up adventure—a determined plan to make a Grand (if Inexpensive) Tour by going wherever the Fates should send us, by whatever pumpkin coach those Fates provided.

Two Thousand Miles in a Month

As it turned out, we covered two thousand miles through a golden autumn month round the North Sea's rim (map, page 685). The Fates—personified by strong, helpful males—were kind to two young ladies with enormous rucksacks. And everywhere we went a vast community of fellow hitchers made us welcome—young people seeing Europe on their wits, a thumbs-up generation.

It all began at tea one lazy London Sunday with a discussion of holiday plans. Erica and I were lamenting that pound sterling restrictions and high transport costs put a sharp brake on continental travel.

The next thing we knew we had taken up a friend's provocative dare: "Why not go down to the Prospect of Whitby and find a skipper who'll let you work your way?"

So there we were, on an East End Saturday night, in the Prospect, famous old water-front pub, sniffing our best at potential skippers who might want a pair of lady deckhands.

The breeze was cool on the balcony overhanging the river and brought an occasional heavenly whiff of cinnamon from a nearby warehouse.

It was pleasant but unrewarding. Neither that night nor any of the succeeding nights did we find the *right* captain.

Very well, if the captains wouldn't come to us, we would go to them. On a hot morning we took the bus which dives beneath the Thames through Rotherhithe Tunnel, to wander through the watery acres of Surrey Docks.

Perhaps in other ports a lady can go right up to a ship and talk to the captain; in London—thanks to extensive pilfering of cargoes in the 18th century—one must first get past a bobby at the gate. We didn't.

However, our bobby was nice.

"Some of the Scandinavian lines do carry stewardesses," he smiled. "Go talk to their agents."

Hitchhiking by Freighter

To make a long, long story short, we ultimately found a Swedish Lloyd agent as willing as we to take a dare. One of his smaller freighters needed a captain's boy on the single trip from London to Gothenburg, Sweden. He took us instead. That agent will be painted in our wills!

Picture to yourself two young women packing rucksacks for a month of foot-loose travel on 48 hours' notice. In imagination the straps already bit into our shoulders, and we scanned each item with critical eye. Would a jar of face cream be worth its weight when flagging cars? You bring toothpaste and I'll take talcum.

We planned, once we reached the Continent, to stay in youth hostels—called *vandrerhem* in Swedish, *auberges de la jeunesse* in French, *vandrerhjemmene* in Danish and Norwegian, *gastejo por la junularo* in Esperanto—different languages, but the same warm hospitality and inexpensive good fellowship everywhere.

With approximately 8,000 members, the voluntary, not-profit-making Youth Hostels Association movement has spread to some two score nations in 43 years. Its fundamental aim is to help teach, especially to young people, knowledge and love of the countryside.

Encouraging adventure, the nearly 2,400 recognized hostels provide the simplest sleeping accommodation and cooking facilities for "all who travel by their own efforts." Member associations recognize each other's cards, so that young people of every nationality, race,

Sprawling Over Three Islands: New York's "the City Between the Bridges"

[illegible] of the modern metropolis, the [illegible] arm of the [illegible] when booms protected [illegible] small [illegible] are displayed [illegible]

[illegible] and purse are welcome wherever [illegible]

[illegible] Sweet-bound ship was the *Amelia* [illegible]

"A large share of British exports is going to the United States," said the first officer explaining why she rode so high above her load line.

Today, [illegible] the resulting roll and pitch [illegible] to work, too hard. We spread [illegible] between [illegible] the [illegible] of the [illegible] of [illegible]

Polishing plates and setting tables [illegible] for the handful of passengers who prefer travel on these [illegible] would have [illegible] the trip.

[illegible] Scandinavian [illegible] to watch much of the [illegible] unfold as we slipped up to the New York [illegible] We passed [illegible] Lamport [illegible] Line [illegible] Norwegian [illegible] lighter [illegible] these waters.

At Copenhagen [illegible] of a

Town Hall Tower Holds Aloft a Star

[illegible]

water front mission played [illegible] fight" to 19th-century emigrant [illegible] England behind them. [illegible] take on a [illegible] to reach their port of [illegible] land beds of the Thames [illegible] The last [illegible] sheered alongside [illegible] pilot capsul to the Angles [illegible] well perfect timing. Do they ever [illegible]

After [illegible] Swedish [illegible] I hauled the galley [illegible] but although [illegible] help [illegible] were the recipes I wheedled out of the professionally [illegible] cook

The captain, however, was happy to talk

Anchovies on shirre [illegible] [illegible] to [illegible] on his [illegible]

[illegible] day as we entered Gideless [illegible] signaling "good luck" to the *Nestor's* sister ship putting out [illegible] As we came on in, Trica and I caught a rapid preview of Göteborg's great shipyards to port.*

On a [illegible] to starboard lay the city, its meandering arm of cliff-top [illegible] signs [illegible] mending me of the Palisades along the New Jersey shore of the Hudson.

[illegible] the captain shouted down [illegible] of a fish restaurant he could highly recommend. He and our shipmates [illegible] solicitous to the last.

Swedish Window to the West

Göteborg lay cupped in the hills on one side of the Göta Älv, and a forest of shipyard cranes [illegible] unsuccessfully to hide the slopes of the far shore.

The city's tall modern apartment houses looked down from the perimeter ridges on broad canals running between Dutch-gabled houses in the town center. Old Göteborg was laid out by Dutchmen imported by the Swedish king Gustavus Adolphus when he founded the [illegible] with an eye on trade [illegible] America.

[illegible] a wild estuary empty [illegible] sailed the *Kalmar Nyckel* [illegible] a Swedish colony on the Banks of the Delaware River. The wonder of Swedish [illegible] was [illegible] of my sixth-grade [illegible] incredulous description of that colony's governor, Johan Printz: It is said [illegible] could hardly believe it—that he weighed four hundred pounds, ate four meals a day and had three drinks with each meal.

We walked at random down green avenues bejeweled by the only rain on our trip. And what did we come to but the statue of Swedish-born John Ericsson, designer of the ironclad *Monitor*, the "Mississippi on a raft," [illegible] Civil War.

[illegible] indeed Sweden's window to the West, linked to the Atlantic community with [illegible] English and Scottish connections [illegible] little [illegible]

City [illegible] enterprise, [illegible] particularly associated with [illegible] Eric. The 18th-century scientist and philosopher Emanuel Swedenborg, one of the first oceanographers, began his research here; in 1947-48 private citizens of the port made possible a 44,000 nautical mile circumnavigation

* See "Baltic Cruise of the [illegible]," by Captain [illegible], National Geographic Magazine, [illegible]

From Land of Pine to Land of Vine, Footloose Hostelers Roamed Northwest Europe

A black line and arrows mark the route followed by author and photographer on their catrikes, low on cue. From London they sailed to Göteborg, Sweden. After exploring Stockholm and southern Sweden, they traversed all the lands that rim the North Sea on east and south. In some cities, like Hamburg and Denmark, the wanderers found scars of recent war still raw, though everywhere rest and peace prevailed. Everywhere, as in tiny Sunderlic, on Lund Island, they rediscovered ways of life long changed for generations.

of the globe by the schooner *Albatross*, fitted with many new tools for deep-sea study.

We were still too fresh and clean to "hitch"—hitching not being an old Swedish custom, anyway. On the Stockholm express we eyed the blond couple across from us without a word. Then someone said something in English, and we laughed aloud at our mutually mistaken identity. Back from Wisconsin to see the Old Country, they gave us our first lesson in basic Swedish.

Stockholm's Floating Hostel

Habitués of luxury hotels would—and do—gape with admiration at the sight of Stockholm's youth hostel. Lying like a great white bird off Skeppsholmen (Ship Island), in the middle of the harbor, Sweden's last big full-rigged [illegible] *Af Chapman*, [illegible] the [illegible] largest [illegible].

Vice Admiral Fredric Henric af Chapman, of English ancestry, designed the Swedish Navy's ships throughout the latter half of the 18th century, publishing a series of texts on naval architecture that have had world-wide influence on that exacting art.

Built in England as the *Dundonne* in 1888, the *Af Chapman* sailed under the merchant flags of Britain, Norway, and, eventually, Sweden for 55 years. Then for two decades [illegible] she served the Swedish Navy as a training ship and [illegible] [illegible] and [illegible] the Diplomat [illegible] by [illegible] of Stockholm in 1945, turned over to the Svenska Turistföreningen (the Swedish affiliate of the International Youth Hostel Federation), and opened as a 130-bed hostel in May, 1949.

Government grants helped pay the heavy costs of conversion, for the *Af Chapman* has individual reading lamps over each bunk, central heating, and elegant hot showers! (Page 540.)

For more than 60 years, now, the Svenska Turistföreningen (which, incidentally, is partly financed by profits from government-

Vagabonding Author and Photographer Start with a London-to-Sweden Ship "Hitch"

[illegible]

[illegible] walking and reading tours to long sunny [illegible] Its beauties today cause just wonder for Erica and the [illegible] Swedish [illegible] most real volume.

The pictures of our start [illegible] the [illegible] Stockholm [illegible] I could hear [illegible] to hear while [illegible] and [illegible] across the [illegible] water [illegible].

Breakfast and supper for Dr. Chapman's [illegible] were [illegible] the upper deck [illegible] Commander [illegible] master steward [illegible] of the most [illegible] in Stockholm [illegible] Coffee and [illegible] [illegible] the best [illegible] made [illegible] were served [illegible] by [illegible] on [illegible].

All in the five [illegible] [illegible] pictures. My [illegible] [illegible] Chapman's [illegible] [illegible] think [illegible] [illegible] was [illegible] the [illegible] with [illegible] [illegible].

[illegible] Ruth Johansson the Dr. Chapman's friendly [illegible]

Hardship in Youth Hostels? Boondes' Smiles Prove It's "the Bunk"

[illegible]

[illegible]

Af Chapman's Sunny Decks Offer Smörgås, Coffee, Cakes, and Cool, Clean Air

[illegible] Stockholm [illegible] restaurant [illegible] Swedish naval [illegible] Sweden [illegible] Stockholm [illegible]

[illegible] of [illegible] took an evening off to go to a small restaurant in Swedish culinary. A kindred [illegible] had recently returned from [illegible] where she had introduced Swedish meatballs with great success to the 200 [illegible] Ethiopian boys in a school where she served as matron.

I spent a blissful evening in [illegible] kitchen and came away with a headful of [illegible] recipes. If anyone wants to know how to make *köttbullar* that [illegible] enjoyed by His Imperial Majesty, the Emperor Haile Selassie, just let me know!

Thanks to the Swedish hostess, we [illegible] all the smörgåsbord we wanted. [illegible] considerable [illegible] is [illegible] to [illegible]

One day we went to Skansen, the city's famed open-air museum. Sweden [illegible] exemplar of everything [illegible] is [illegible] with [illegible] At Skansen one can trace the development of Swedish homes from the simplest [illegible] to [illegible] manor houses. Surviving buildings, brought here from all parts of Sweden, have been reerected on an [illegible] overlooking the harbor.

Log cabins were used in Sweden before discovery of America, and parts of Skansen look

"There's Where I Live!" Gave Two Points to This Picture

A friend's Copenhagen [illegible] gave her [illegible] ment. On [illegible] Finland [illegible]

rather like the [illegible] settlement at Salem, Massachusetts.

The [illegible] show an altogether different style—[illegible] domed [illegible] for which was brought from Russia by Charles XII's troops [illegible]

We saw [illegible] Tower that [illegible] were the [illegible] figures in the wide metal [illegible] depicting the [illegible] which has protected

September Is Wild Mushroom Month

On Sunday [illegible] Insect-Eaten [illegible] —to learn that gathering wild mushrooms for winter [illegible] September activity here.

There is [illegible] and alluring [illegible] Finland, [illegible] Before we took [illegible]

knickers to walk barefoot through the cool moss and dripping pine needles. Dinner was served just the right [illegible] to a blackbirds' [illegible] Finland might have only [illegible] in one place.

The Swedes themselves are second to no [illegible] appreciating fine food. Lovely [illegible] and [illegible] are [illegible] regularly [illegible] the [illegible]

The Government [illegible] paper [illegible] from [illegible] sales from State forests. [illegible] growing [illegible] of supplies to increase their [illegible] by the Swedish [illegible] Large Wood [illegible] paper [illegible] export.

During World War II, [illegible] were converted [illegible] crossing the Swedish [illegible] and Iron. Wood [illegible] and fertilizer alcohol replaced [illegible] and gasoline as fuel. [illegible] created wood pulp and waste [illegible] supplied [illegible] and clothing was [illegible] out of Swedish [illegible] Glue [illegible] paper sheets and pillowcases.

[illegible] we spent on the SS Copenhagen [illegible] for a [illegible] hotel stay. [illegible] for Denmark. Crossing the [illegible] to the ferry from Malmö to Copenhagen [illegible] Where [illegible] seemed to [illegible] the [illegible] the Nazi occupation.

We [illegible] adjacent to the Tivoli Gardens [illegible] were surrounded [illegible] girls in peasant [illegible] It was like walking up in the middle of a [illegible] We couldn't understand each other, but [illegible] Wood and News [illegible] a fashion show.

The [illegible] were [illegible] with white and white. The [illegible]

[illegible] were [illegible] [illegible] [illegible]

"Pint-size" Means Small, Unless It's a Continental Cup of Coffee

[illegible] northern Europe [illegible] Stockholm [illegible] the author (left [illegible] Swedish [illegible] Swedish towns [illegible] their [illegible]

[illegible] good [illegible] the natural [illegible]

[illegible] citizens of this little country can [illegible] to [illegible] spirit and letter of [illegible] Danish Constitution forbids anyone to starve.

Kitchens Without Stoves

To our surprise, we could find [illegible] Danish kitchens. Two [illegible] stood neatly on marble [illegible] small portable ovens appear as needed.

We knew we had Copenhagen in the palms of our hands the day we stopped an electric tram. Friars lured blew on the [illegible] as the tram started to leave. We [illegible] troubled [illegible] visitors. The [illegible] hinged climbed down to the roadbed, retrieved and restored the lever with [illegible]

We left Copenhagen [illegible] hoping for a [illegible]

with her conscience, wouldn't stand outside on the corner to flag the cars, but insisted on walking down the road to make it look as if we *meant* to hike.

Not five minutes after they had [illegible] us and we [illegible] into the back of a [illegible] Ford, the jovial types who [illegible] to have us join them in a beer. It took several minutes to explain, through the language barrier, that we preferred the road.

Three young men of the hitchhiking fraternity were already on the Sjelland-Fyn ferry when we walked up the gangplank at [illegible] The five of us—as all [illegible] notes.

Two of the boys were American—University of California [illegible] class of [illegible]. They had come to Europe it [illegible] for wealthy compatriots, [illegible] that now they were making [illegible] on their own.

No Supermarket Serves Fresher Fish than Copenhagen's Streets de Mart

© Rom. Tile

Sailors Hang Ship Models on Sandefjord's Church as Thank Offerings for Safe Return

[illegible] town's 18-century church with [illegible] to shelter [illegible] ground for [illegible] "Peace on Earth, Good Will to Men." Sailors and the church [illegible]

They started off on the wrong foot with German-born Erica by recommending a popular travel guide printed in New York. She was furious before she had read ten pages.

"This book," she explained, "[illegible] as if Americans visiting Europe [illegible] going to the zoo."

The third boy was a New Zealander. He grinned when we kidded him about the tremendous pack he carried; but late that night when the rest of us were driven to a Nyborg hotel, he simply pitched his tent in the park.

Two-year Thumbing Tour

Literally carrying his home on his back, he [illegible] Europe for a couple of years before settling down on an antipodean sheep farm. To earn enough for the next year's sight-seeing, he hoped to find a winter's farming job in Denmark.

The three were [illegible] typical of the thousands of [illegible] all but new-made friends and extended horizons. [illegible] hoosiering

Many are Americans bringing to the Continent ex-veterans' benefits, which allow just enough pocket money for such frugal touring. Others arrive on UNESCO-sponsored scholarships, while many newly poor sterling-area residents [illegible] their limited foreign currency only for hitch-hiking and hostelling.

Denmark's busiest west-coast port, Esbjerg is [illegible] by hitching travelers. For Erica and me it was definitely the high point of our thumbs-up month. By the time we had been there 24 hours [illegible] knew about the two girl hitchhikers from [illegible] and everyone had become our friend. The local paper even requested an interview.

As if to [illegible], the fishing fleet was in. [illegible] found the quays of the fishing harbor [illegible] we couldn't get perspective for a picture of them all, five hundred little [illegible] and large-tailed fishing boats had been driven into port by a North Sea storm.

We rose at crack of dawn to watch the fish auction. Ranged symmetrically along the wet brick floor indoors was row on forty row, the

Sønderho Women Chat and Knit in a Cozy Old-World Setting

[illegible] Denmark [illegible] For a small [illegible]

h[illegible] and the [illegible]-sized [illegible] glass, all [illegible] by a [illegible] with white whiskers. [illegible] we were [illegible] known each [illegible] and herring [illegible]

Many of the [illegible] spoke [illegible] English, and all who did so immediately offered their services as guides.

Fanø's fishing boats, they told us, are a family affair, as in other Scandinavian ports. Or perhaps it would be better to say [illegible] affair. The first half of the haul always goes to keep up the boat.

General conversation [illegible] when we [illegible] that we had not yet breakfasted. The harbor master himself [illegible] us to his favorite restaurant, ordering a meal so tremendous as to [illegible]. While we ate, he phoned [illegible] at shipping [illegible] who might [illegible] going south to continental ports we still wanted to visit.

Alas! [illegible] the harbor master [illegible] us [illegible] most traffic from Esbjerg went back to England. So, Copenhagen bound, [illegible] turned [illegible] to the [illegible] chance of catching a ride [illegible] Esbjerg-to-Brussels [illegible] we decided to [illegible]

Cape Cod in Fancy Dress

But first we visited Fanø, whose [illegible] is [illegible] 20 minutes by boat from Esbjerg. [illegible] strongly suggested Cape Cod in fancy dress.

The [illegible] cottages were Cape Cod in weathered pink brick, thatched with black reed. [illegible] we saw [illegible] whalebone [illegible], there was a figurehead from the *[illegible] Polar* [illegible] over the gate of a white picket fence.

The [illegible] of Nordby [illegible] the [illegible] came out from behind his [illegible] counter to greet us.

"Ah! We are so [illegible]!" he exclaimed, throwing a large [illegible] arm about us.

It was the [illegible] English phrase he knew—but what a phrase!

[illegible] any wonder that [illegible] Denmark seems

a well-padded laughing man holding out his arms in welcome?

A friend of the postmaster let us rummage through her treasure chest of old costumes.

Unlike most folk dresses, the Fanø variety is unbelievedly somber (page 697). A colored band around the bottom of the black skirt indicates the wearer's status—deeper black for widows, dark blue for those in mourning, and dark green for others. Married women leave the outer button over one breast undone. We were told that the razor-sharp pleats are achieved by a yearly steaming in the village baker's oven.

With history at our fingertips we could trace [illegible] through the stuff of grandmother's and great-grandmother's skirts. Some of the blouses had buttons of amber. This was one of Denmark's earliest exports and still is washed up on Fanø's beaches by storms from certain quarters.

As in New England, the household treasures were pieces of old English china brought home by sailor husbands; willowware, luster, and spode. We gasped when a casually opened pantry door revealed pieces a connoisseur would envy.

Church Was Haven from Storms

At Sønderho, the island's other village, we saw a clothesline of fish hung out to dry. These the islanders eat right down to, and including, the last bone.

A picturesque backwater today, Sønderho once boasted seven shipyards and a fleet of 150 sail. Ship models hanging from the beams of the parish church were whittled out on long voyages and presented by sailormen as tokens of gratitude for safe return (page 696). The 18th-century church, with its sky-blue pews and glinting brass, was built large enough to house every family in the village in case of storm-driven high water.

Back in Esbjerg, Carl Hansen, who had been a wonderful guide at the fish auction, insisted we visit his netmaking shop. Ropy and furry and full of seaman's "spare parts," it was, I think, the most photogenic place in Denmark. Erica said it made her camera feel good just to look at it.

Then hand in hand, or arm in arm, he led us around the harbor to friends' shops—to the blacksmith, forging a ship's anchor, and to the boatbuilding yards, where backbones and frames for fishing boats were growing on the stocks.

There was great secrecy about the names of the embryo vessels. Fishermen believe that revealing the chosen name before launching brings bad luck.

We made a date with Carl Hansen that night—to meet the missus. And now I must confess my photographic failure.

The "we-are-so-beautiful" Fanø postmaster had jokingly offered us a 12-inch "Souvenir of Niagara Falls" cigar; but cigar smoking is no joke to the good ladies of Esbjerg. When Mrs. Hansen hospitably extended a box of cigarillos, Erica took one to be polite. I can see her yet, inhaling casually and quivering from stem to stern on the exhale!

It was obviously an occasion. The [illegible] making photograph would show Erica and the cigar with a backdrop of beaming Hansens. Erica set the camera up, fixed things so I "couldn't miss," and leaned back prettily to puff and to pose.

Of course when the film was developed, I had drawn a blank. Understandably, photographs of Erica on our trip are few.

Our pumpkin coach in fish-truck form would materialize, we were promised, sometime the next evening. But even Cinderella's good fairy would have been hard put to stage a more impressive send-off than that provided, ad lib, by Esbjerg's Ny Missionshotel.

In the dining room a gay wedding party was in progress. There was much skoaling and clinking of glasses. The wedding cake was a gorgeous confection of pyramidically coiled tiers of almond dough.

Swish! A pot of coffee and huge slices of the rich cake, decorated with small Danish flags, appeared before us—with the compliments of the smiling manager.

"Old Black Joe" in Danish

Midnight came, but no coach; then 1 o'clock. The bridal couple retired. The wedding guests rendered "Old Black Joe" in Danish—a bit off key—and went home. Erica and I remained.

Another wave of the Danish wand—manager's compliments again—and blankets and pillows appeared to curl round us on the settee.

We found later that the van had waited for a full 15 tons of mussels to be landed. But once the shellfish were aboard, we soon were rolling along through the hushed countryside. Touched by the silvery moonlight, the medieval town of Ribe, famous for its storks, might well have been the capital of Fairyland.

Numerous will-o'-the-wisps floated by—cycle lights of convivial Danes bound belatedly homeward. Our fantastic night was capped by the sight of a pair of portly gentlemen madly pursuing a moon-struck cow.

Dawn was breaking as we pulled up at the German frontier. Before we were to reach its far border we would feel as dreary as the war-broken countryside we traversed.

Our chauffeurs drove themselves hard, stopping for food only three times in 36 hours

Want a Sugar Scoop, Dinner Bell, Teapot, Bowlers? This Brussels Market Sells Them

[illegible]

[illegible] passed [illegible] the Dyle, and [illegible] the city [illegible] for [illegible]

As we rattled [illegible] and west across Belgium, the Germans [illegible] how [illegible] had been [illegible] passed [illegible] the Nazis [illegible] to leaving the [illegible] [illegible]

[illegible] under the German gauntlets, [illegible] explained that it [illegible] pleasant [illegible] the end of the war to be [illegible] by Allied liberators [illegible], for whom this [illegible] was [illegible] [illegible]. They looked back on [illegible] ordeals in hell they had somehow managed to survive.

When a lucky tire [illegible] the drivers pretended [illegible] the Netherlands border rather than [illegible] the country they had already [illegible] too much of.

So that is how we [illegible], stranded and sleepy, at the midnight border rendezvous mentioned earlier. While [illegible] Netherlands MP's held [illegible] for the [illegible] to pick up [illegible] and [illegible] [illegible] and stretches [illegible] bridge.

Brotherhood of the Open Road

[illegible] appeared from the roadside [illegible]. [illegible] I spent a week myself trying to [illegible]

[illegible]

[illegible]

[illegible] the crowded [illegible]. [illegible] waiting for days to [illegible] [illegible] across [illegible]

"But it's [illegible] up to [illegible]," said [illegible] of [illegible] optimism.

Looking at [illegible] we remember [illegible] of German [illegible] and [illegible] and the

Hamburg's Shipyards Hum Again. Up the Busy Elbe River, a Tug and Barge Tow War Wreckage Bound for the Scrap Pile

Brussels' Daytime Buzz of Business Yields to Gaiety at Night

Smiling Fishermen Set the Mood for Battered Dunkirk, Rising from Its Rubble

[illegible] France's North Sea port. [illegible]

[illegible] of youth for the couple [illegible] of the road.

For [illegible] minutes we played guessing games as to one another's nationality. (People seldom mistake an American!) [illegible] faces are [illegible] of [illegible]. Then we heard the motor start, waved them back, and ran.

Like a youngster determined to keep awake for Santa, I tried [illegible] crossing the misty flats of the Netherlands in search of a [illegible] to see the [illegible]. I [illegible] must have missed the [illegible] for [illegible] through a heavy [illegible].

At the Belgian frontier the [illegible] were [illegible] and the [illegible] displayed to the customs authorities. Everything was in order and off we drove.

"Hey!" [illegible] the [illegible] passengers. "You [illegible] give us a chance to have our passports stamped!"

"That's [illegible]," the drivers answered us. "They never bother with us."

[illegible] as we left the country again [illegible] before us. [illegible] to [illegible] up adventure.

Brussels, perhaps more than any other city in Europe, [illegible] reputation [illegible]. We came, we saw, and were conquered. Nothing [illegible] so much as the [illegible] which [illegible] our [illegible] Belgian meal (page [illegible]).*

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* See "Belgium Comes Back," by Harvey Klemmer, National Geographic Magazine, May 1948.

In the Full-size Original of *Neck*, Karl Battré Twice Rounded the Horn

[illegible]

But of all the creations [illegible] appealed [illegible] most [illegible] magic shop. We [illegible] and the Bruges-ed horse. [illegible] as well as we [illegible] a [illegible] exercise [illegible] with the [illegible] possibilities.

[illegible] these days are so accustomed to [illegible] never [illegible] when you [illegible] looking like a pack rat and ask for a room.

Stepping Back Six Centuries in Bruges

We arrived back in the Middle Ages in Bruges late that afternoon. The [illegible] where we were then riding with a pilot of Sabena Belgian airline threaded its way [illegible] the most picturesque of the old [illegible] cobbled streets [illegible] and [illegible] and [illegible] the town square. It was like walking [illegible] a real [illegible] manuscript.

Bruges was [illegible] power in the [illegible] and [illegible] compared to Venice [illegible] by [illegible] in the [illegible] century. The Gothic [illegible] [illegible]

The [illegible] suggested [illegible] Bruges. The [illegible] gave us one [illegible] a golden day, [illegible] light and [illegible] and [illegible] strolling over the [illegible] cobblestones and [illegible] six centuries back in time, peeping into gabled houses with [illegible] Van Arteveldt

his "Man with the Pink," and the more earthy characters of the Bruegels.*

At the Brugge hostel that night we shared our bunk room with a Breton miss of twenty, traveling entirely on her own, as surprisingly many European girls do. Our circumnavigation of the North Sea paled a bit as an achievement when she passed out mosquito bites purchased six weeks before in Norwegian Lapland!

Next day we climbed the Belfry and watched the bells as they gave a carillon concert. A quartet of the way up the 402-step climb was the Secret Comptoir, or ancient treasure room, where the city's medieval charters were kept. Some six centuries ago the good burghers of Brugge had their own version of a combination safe: ten keys were needed to unlock the Comptoir, and each was in custody of a different citizen.

Magnifying Glasses for Art Lovers

At the Hospice de St. Jean, Hans Memling's masterpiece, the Reliquary of St. Ursula, is exhibited in the former medieval chapter room. The Flemish artists of his period were all noted for their fine detail, and attendants now hand out 8-inch magnifying glasses so that art lovers can minutely examine each facet of illumination on this chapel-shaped chest about 3 by 1 by 2½ feet in size.

We had to walk for a full mile out of Brugge. Nevertheless, we reached Nieuwpoort about 5 in the afternoon, having tramped southwest along beaches that saw much fighting in both World Wars.

Two Belgian hostelers materialized from nowhere just as we were wondering what to do next.

"Ye a looking for a hostel?" they called, explaining that the nearest one still open was at Dunkirk (Dunkerque), 20 miles on.

"And the last bus for Dunkirk leaves in five minutes," said one, grabbing me by the wrist. The other seized Erica, and together they dragged us and our packs pell-mell to the bus, all of us boarding just as the wheels began to roll.

At the French frontier we meekly pulled out our unstamped passports, expecting a spluttering, arm-waving, hair-pulling session in the best Gallic style; but the official didn't even turn the pages. Our mental picture of sending postcards home from jail collapsed.

But the bus conductor made a half-hour ritual of guiding us to the Dunkirk hostel.

First of all, he very gallantly presented us with a candy bar. Erica, in turn, presented him with her last pack of British cigarettes.

He told us how sad it was—the driver had received word of a death in the family. We agreed it was sad indeed.

He said Dunkirk was a big place, larger than we would think. We waited. But he, the bus conductor, would know just what the young ladies should do. He would write down an address for us. He did; then took us to the car stop and put us on a tram.

Soon we were presenting ourselves as directed at the prefabricated Aide Americaine building. Through the open windows came a strange caterwauling. We looked at each other. A harassed nurse emerged and shook her head. She was sorry, but Aide Américaine was for the care of infants, not people our size, whether Américaine or not.

Hostel hunting round Dunkirk after dark was like plunging headfirst into an unknown pool. We would start down what we thought was a street and find ourselves teetering on the edge of a cellar hole where a bomb or shell had crashed through the façade of house fronts. In places the streets themselves seemed to disappear in shapeless rubble.

We were delighted to settle for a one-family, very French, hotel-café whose proprietress had a marvelous time cooking her specialties for us.

Next morning we had a good look at the battering Dunkirk had received: worse, it seemed to me, than Hamburg (page 701).

Here, overlooking Dunkirk's tragedy-torn harbor, the Fates decided to wash their hands of us. A cross-Channel ship bound for Dover was toolling at the quay; and glancing at its nostalgic name, *Tuckenham Ferry*, we suddenly found we were in a terrific hurry to get back to woolly old sit-by-the-fire London.

Lost Within Sight of Home

At Dover, a couple from the ferry gave us a lift in their car.

So—we got lost, really lost, for the first time in one month and two thousand miles, well within the glow of London's lights. It seemed our "friends" had merely wanted to pump us on how their teen-age daughter should start out on her first hitchhiking expedition. About 10 p.m. they decided London wasn't on their way home at all, and plumped us down in an Essex cornfield.

We had a frantic two-hour cross-country race to reach London's underground before it closed down for midnight. I caught the last tube home; but Erica wasn't so lucky. She had to wait another hour for a suburban train. To pass the time, she says, she started telling the station guard about our trip.

"Wonderful, Miss," he said—and again a strong helpful male beamed in kindness—"that was wonderful, that was. You wait right here 'ere. I make you a cuppa tea and then you tell me all about it."

* See "Masterpieces on Tour," by Harry A. McBride, NATIONAL GEOGRAPHIC, December, 1948.

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Articles and photographs are desired. For [illegible] of The Magazine [illegible] consideration is made.

In addition to the educational and popularizing activities [illegible] the Society has sponsored more than 160 [illegible] which represent years of hard work to attain our [illegible] objectives.

The Society's [illegible] expeditions have pushed back the historic horizons of the [illegible] nearly eight centuries before [illegible] by dating the ruins of the Vikings' Leif Ericson in that region. The Society's researchers solved secrets dim and puzzling [illegible] three hundred years.

In Mexico The Society and the Smithsonian Institution, January 19, 1933, discovered the oldest work of man in the Americas for which we have a date. This was a stone [illegible] engraved in Mayan characters with a date which [illegible] November [illegible] 200 years [illegible] brought [illegible] to America [illegible] and reveals a [illegible] of early American culture previously unknown.

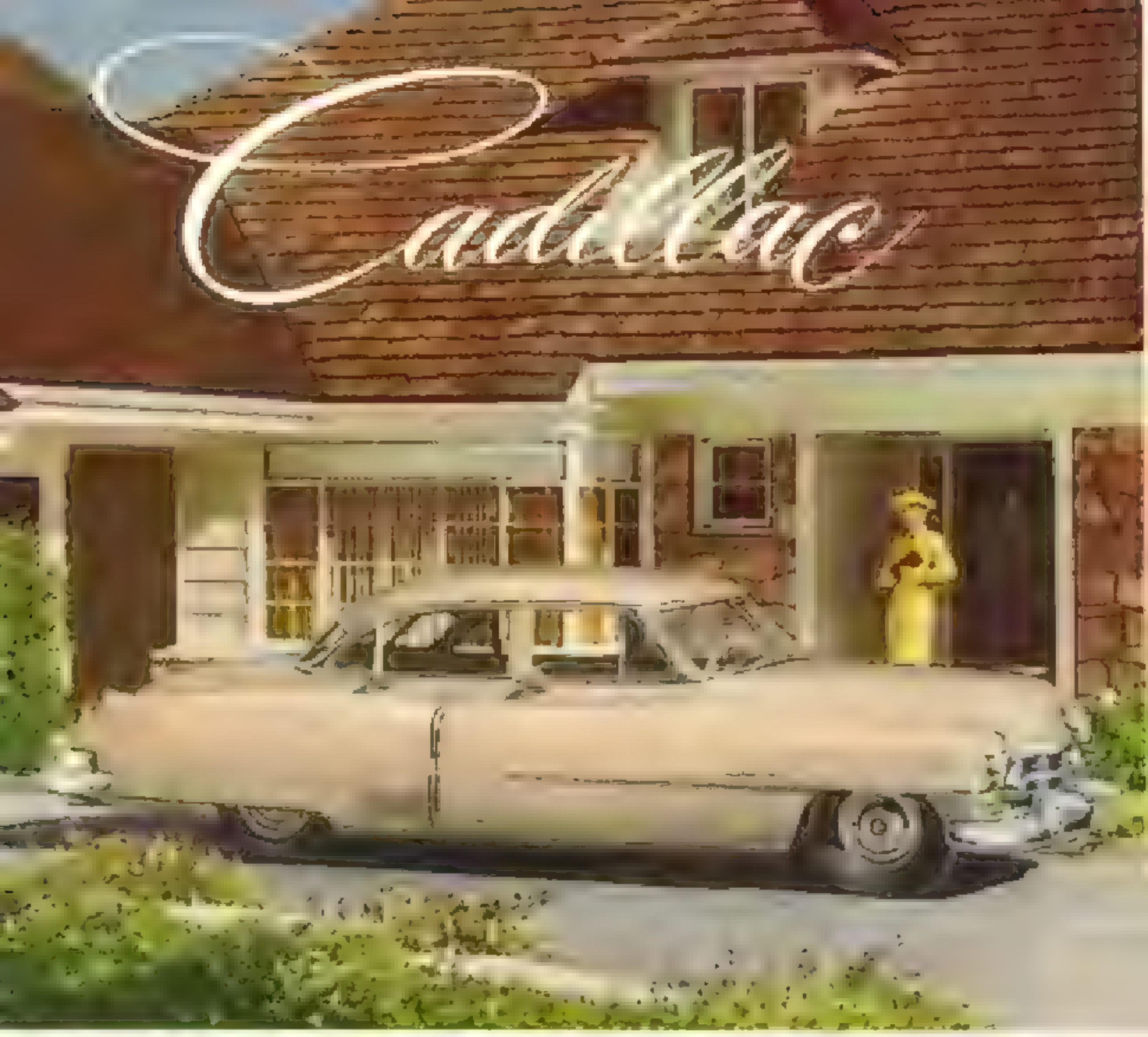
On November 11, 1935, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, [illegible] Explorer II ascended to the world's [illegible] record altitude of 72,395 feet. Captain Albert W. Stevens took [illegible] of scientific instruments and [illegible] of extraordinary value.

A great undertaking in the history of astronomy was [illegible] the 50th anniversary of the Carnegie Institution of Washington. This project will [illegible] four years to photograph the vast realm of space, and will provide the first sky atlas for observatories all over the world.

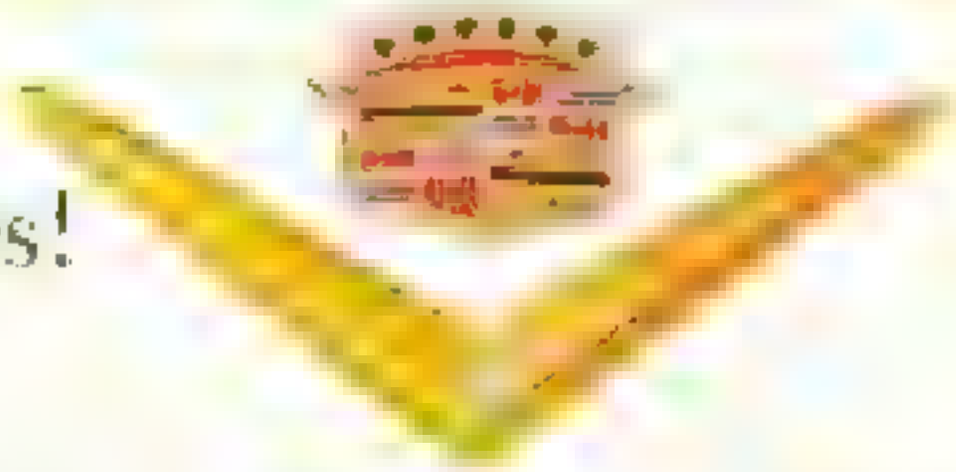
In 1938 The Society sent out seven expeditions to study [illegible] of the earth's surface, from Burma to the Arctic. The fruitful results include [illegible] of Soil in Mexico and Peru.

[illegible] executed by [illegible] the preserve for the American people the [illegible] of the giant sequoia tree to the [illegible] west of Sequoia National Park of California.

One of the world's largest [illegible] and planned a [illegible] while working for The Society and the Harvard [illegible] of Tropical Botany, 1938.



Highlight of the Day's Activities!



[illegible]

YOUR CADILLAC DEALER

Even the Adirondacks no barrier to G-E Black-Daylite Television

Famous Higby Club reports long distance power does what experts called impossible!

[illegible] Higby Club [illegible] Black-Daylite TV. [illegible] Black-Daylite TV [illegible] to G-E Black-Daylite TV [illegible] See Model 21-C105 today.

[illegible]

BLACK-DAYLITE TV

[illegible]

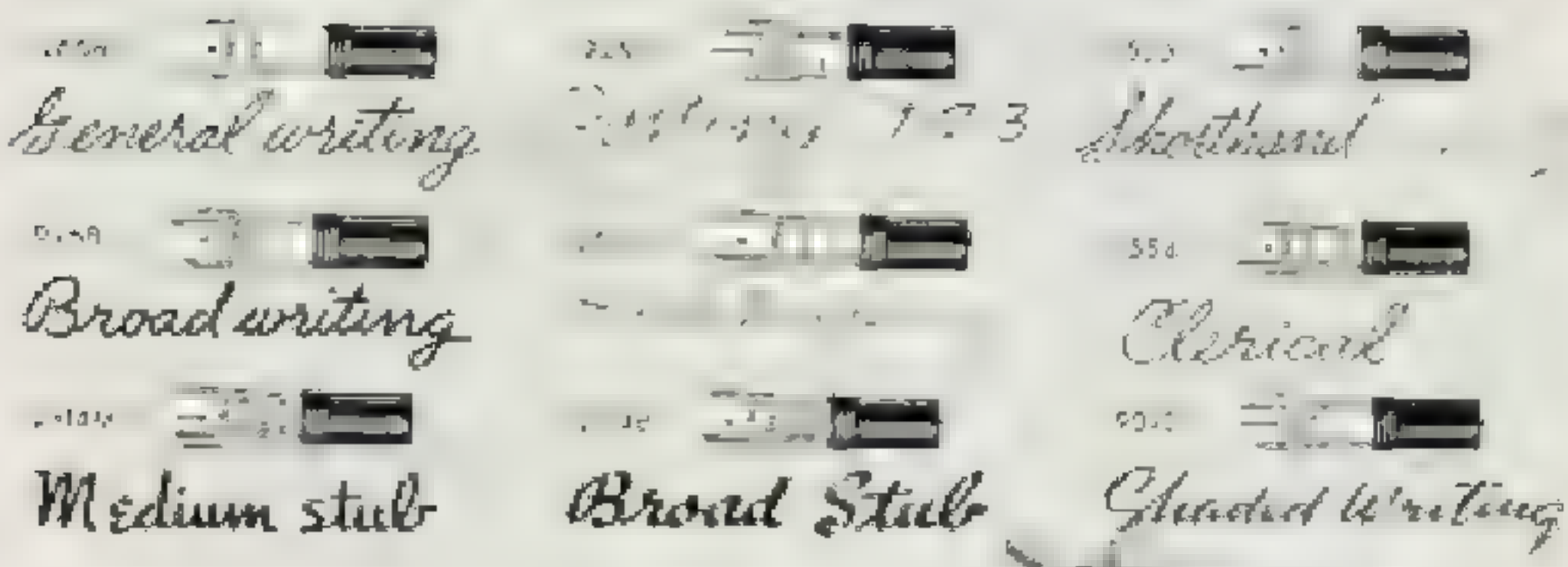
You can put your confidence in—

GENERAL ELECTRIC

[illegible]

CHOOSE

THE RIGHT POINT FOR THE WAY YOU WRITE



Only a few of the more popular point styles shown

Match your pen to your writing . . . by choosing an Esterbrook, the pen that gives you *the right point for the way YOU write.* From the world's largest selection of point styles, select the point that suits you best, and screw it into the pen yourself.

And remember, in case of damage, your Esterbrook point is *instantly* renewable, at any pen counter.

Esterbrook

FOUNTAIN PEN

ESTERBROOK—AMERICA'S PEN NAME SINCE 1858

You, too, can enjoy a delightful, *pre planned* vacation this year. Simply put American Express Travel Service at your service. There's none better!

YOUR CHOICE OF:

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A Complete World-Wide Travel Service

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The Traveler's Friend—from Beginning to End

Ask for AMERICAN EXPRESS TRAVELERS CHEQUES
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Please send free booklet, "How to Travel by Air" . . .

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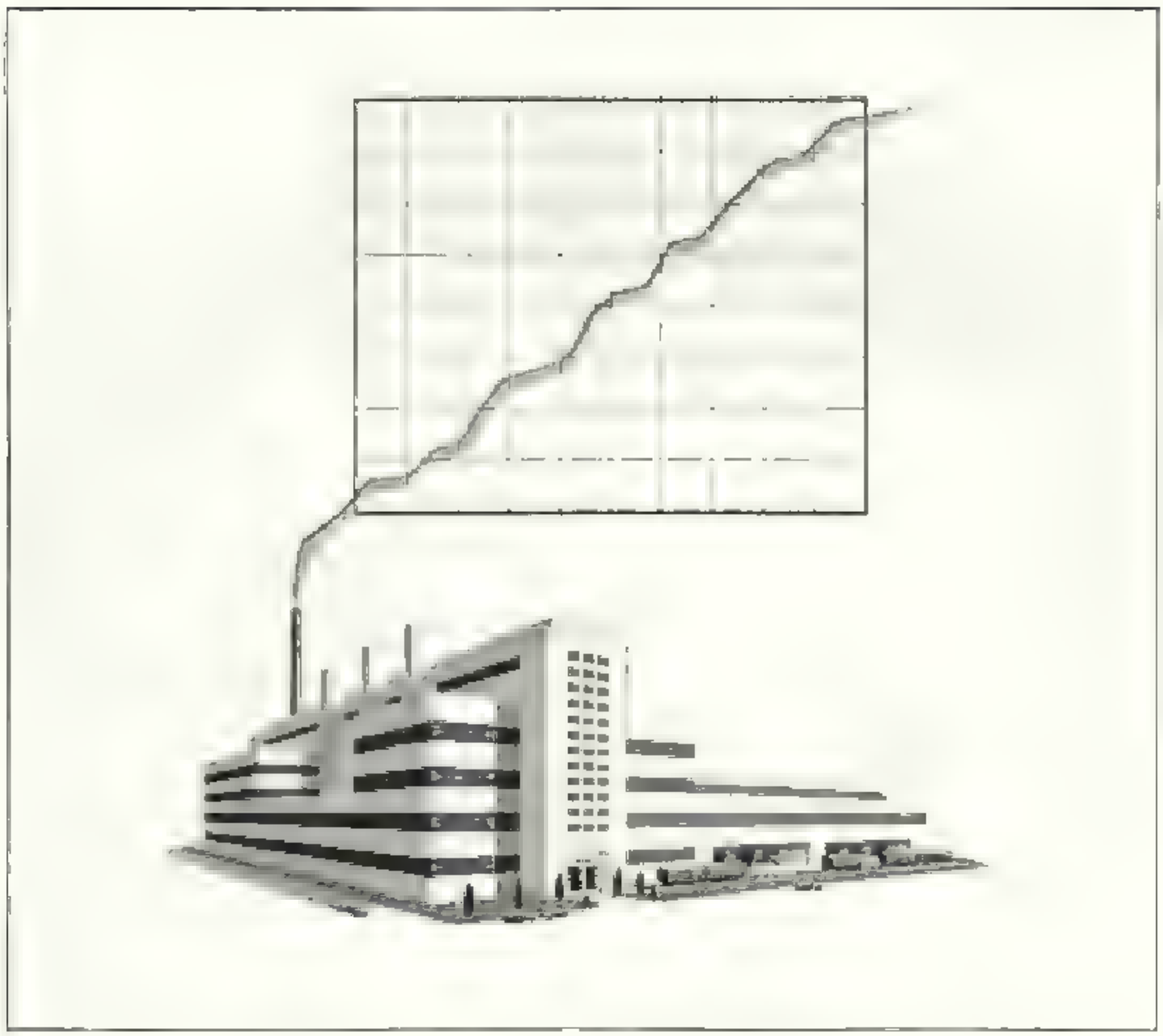

Things are UP and UP ...down South!

Look at any chart recording the amazing industrial development of the modern Southland. You'll notice that production is UP, industrial construction is UP, plant enlargements are UP.

Construction costs in the South last year totaled an all-time high of $3½ *billion*. Industrial contracts of more than $2¼ *billion* were double those of the previous year. Expansion in the Southland's chemical and metals industries alone reached multi-million dollar proportions in the year just past.

All signs point to still more business activity, still greater industrial growth and opportunities, in the Southland served by the Southern Railway System. But why not see for yourself? . . .

"Look Ahead — Look South!"

Harry A. DeButts
President

LOOK SOUTH
LOOK AHEAD

SOUTHERN
RAILWAY SYSTEM
WASHINGTON, D. C.

The Southern Serves the South

Clearing the track of clickety-clack

You ride in comfort on longer-lasting rails because the song of the track is being stilled

[illegible] familiar clatter and clatter has been [illegible] music to some of us when we travel. But it's been a headache to others . . . particularly our rail users.

Wheels pounding on rail joints cause jolting and wear [illegible] Yard wear means [illegible] repairs and replacements of rail and other lines that connect the [illegible]

ELIMINATING RAIL JOINTS "Thermorail" is [illegible] important news [illegible] way to [illegible] the high cost of joint maintenance by eliminating the joints themselves.

RAILS BY THE MILE—"Thermorail" is formed by welding ties rails together under pressure in the controlled heat of oxy-acetylene flames. The welding is done on the job before the rails are laid . . . [illegible] to a mile or more in length.

Nothing longer than rail in use now seems [illegible] resistance of expansion and contraction under extreme changes in weather and temperature. "Thermorail" engineering has solved this problem . . . reduced rail maintenance costs and [illegible] the comfort of a smoother, quieter ride.

A UCC DEVELOPMENT "Thermorail" is a development of the people of Union Carbide [illegible] [illegible] years of service [illegible] of America.

FREE: [illegible]

UNION CARBIDE
AND CARBON CORPORATION
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UCC Trademarked Products of Alloys, Carbons, Chemicals, Gases and Plastics include

[illegible]

Latest in a series featuring Top Secretaries including Northrop Aircraft Inc., Hoover Co., and Pacific Gas & Electric Co.

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and thousands like her prefer the Remington *Electri-conomy*

Today, essential industries realize that it takes peak output in the office to achieve peak production in the plant. That's why top secretaries like Miss Lula of Westinghouse go for the speed and effortless typing of the Electri-conomy — those 15 clear carbons at a single typing — this handsome "Executype" for letters of true distinction that will be signed with pride — and that glorious "alive-at-five" feeling because electricity does the work!

Top Secretary ALVA S. LULA Secretary to Gwilym A. Price, President Westinghouse Electric Corporation, says: "The Electri-conomy helps me pick my work out at record time, without any effort—it also turns out the most distinctive correspondence and reports. Here is Electric typing at its very best."

Remington Rand THE FIRST NAME IN TYPEWRITERS

Mention the National Geographic—It Identifies you

TIPS ON TRAVEL

by HORACE SUTTON

Herald Tribune
and Travel Columnist

Can't wait for summer? Don't move into a Greenhouse. Catch a Sun-Liner instead!

The painless way to summer without waiting out the calendar or locking yourself in a greenhouse is to board a Sun-Liner that plies from New York to the Mediterranean. The Sun-Liner sails to Europe [illegible] and a cracking climate. Weather observers [illegible] on 87 per cent of the days only a drop of rain should splatter off the decks of a Mediterranean Sun-Liner. This phenomenon derives from no special arrangement between Mother Nature and any steamship lines. It is simply based on the average of dusty weather reports kept for 100 years.

Sun-Porch of Europe

It's the custom aboard [illegible] the Sun-Porch of Europe. Near Genoa on the Italian Riviera, lemon trees bloom on the sunlit bougainvillea trees and over the villa walls, and planes loaded with carnations grown on the stepped Italian hills, take off for Scandinavia to spread the sunshine to the northlands.

Across the Mediterranean Sea at Grasse, twelve miles from Cannes on the French Riviera, the flower-pickers from the perfume factories are up at dawn to pick the jasmine before the sun's heat sends the fragrance into the air. Over in neighboring Spain next year's olives and the trees are [illegible] sun wheedles a lower shimmer out of the pastel olive leaves.

Hub of Continent

When you alighted into Europe from the sunny, southern skies, the whole Continent lies before you like Paris from the Eiffel Tower. At the ticket counter lately a short row of pamphlets [illegible] the magic word [illegible] Frankfurt Vienna Montepulciano.

Great New Sun-Liners

That brings us, pointing, to the best [illegible] means of getting to and under this [illegible] Mediterranean sun. Unbridle your [illegible] imagination. Make believe you are in [illegible] the very last word in hotels. [illegible] this hotel and slip a hull under it and you have the Constitution or the Independence, American Export Lines' new twin luxury Sun-Liners. Modern in [illegible] lines cut out of the pages of a magazine cover, [illegible] completely equipped sleeping rooms at the top [illegible] the sky and a top on a tanner.

See Your Travel Agent

The American Export fleet also includes the [illegible] Azay which [illegible] Egypt, Lebanon, Syria, Turkey, Greece, South returning to New York via [illegible] Independence and Constitution pick up [illegible] Cannes, Genoa and Naples.

[illegible] give you the chance to see more of the Continent than the passenger of the [illegible] Express. Put your ticket to sun, petunia or Sorrento sun, do not walk, to your travel agent.

Published as a travel service by

AMERICAN EXPORT LINES

39 Broadway, New York 6, N. Y.

NEVER TAKE OFF WITHOUT

NCB

TRAVELERS CHECKS

[illegible]

The best thing you know wherever you go

NATIONAL CITY BANK TRAVELERS CHECKS

Backed by The National City Bank of New York
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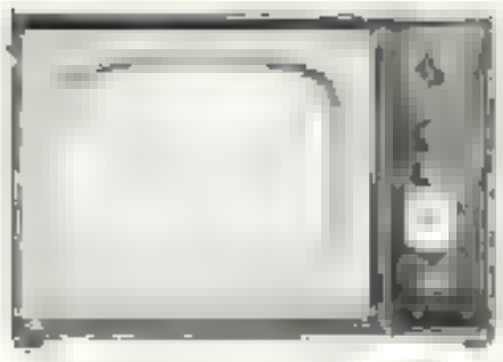

The DESIGN, by DuMont,

The DIAMOND,
by DuMont

EXPECT TO BE ENVIED

that's part of owning a

DuMont

TELESET

As you would expect from DuMont—
pioneer in television—here is the thrill of seeing
a picture flawless in realism. As you would expect
from DuMont—leader in electronics—here is

- the new [illegible] tube
that gives you a picture [illegible] you could!
- the new Distant-Station [illegible] that makes you to enjoy
transmission from near or distant stations
- [illegible] Station [illegible]
gives you clearest pictures possible! • and
provides for a [illegible] screen!

DUMONT pictures

As you would expect from DuMont—
here is the culmination of the most
advanced television research and skill!
Look for Dealers
See your DuMont
DuMont [illegible]

The [illegible] of [illegible] by DUMONT

How dangerous is it to "close your eyes"

to these 4 facts about record protection?

(So dangerous . . . it could put you out of business!)

It's dangerous to [illegible] the fact that [illegible] Safety Department [illegible] crystals and other [illegible] protection is never equal.

It's dangerous to [illegible] your eyes to [illegible] that [illegible] "equal" [illegible] a simple wall-in and [illegible] box a few inside an office.

It's dangerous [illegible] insurance records when temperatures get above 130° F.

It's dangerous [illegible] 60 days." How could you [illegible] without records?

Designed by Raymond Loewy . . . The new Mosler "A" Label "400" brings new and [illegible] beauty to any office . . . together with new convenience and security features, including [illegible] Lock and new "Instrument Operations Panel" with dial and horizontal handles at [illegible] angles.

Isn't the risk too great?

Find out, today, how little it costs to protect your record and your business future—with a modern Mosler "A" Label Record Safe. It's the world's best protection. Meets and exceeds the full protection Underwriters' Laboratories, Inc. [illegible] requires.

IF IT'S MOSLER . . . IT'S SAFE

The Mosler Safe Company

Since 1848

[illegible] Mosler built the U. S. Gold Storage Vaults at Ft. Knox and the firm that made that [illegible] the Atomic Power at Elmshaven

CONSULT CLASSIFIED TELEPHONE DIRECTORY FOR NAME OF THE MOSLER DEALER IN YOUR CITY, OR MAIL COUPON NOW FOR INFORMATIVE, FREE BOOKLETS.

THE MOSLER SAFE COMPANY • Department N64-5, Hamilton, Ohio

Please send me (check one or both):

☐ Free booklet giving the latest authentic information on how to protect records [illegible]

☐ Illustrated catalog describing the new Mosler "A" Label "400 Series" Record Safes.

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FIRM NAME _____

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sun, surf, scenery!
Explore Canada's

PROVINCES BY THE SEA

ONE OF CANADA'S 10 TOP MAPLE LEAF VACATIONS

Here's a world that's different . . . The forests, the [illegible] and verdant valleys of New Brunswick. The cliffs and coves and fishing ports of Nova Scotia. The beaches [illegible] of Prince Edward Island. The rugged [illegible] of Newfoundland. Plan now. Ask your nearest Canadian National Office or Travel Agent about this or the other Top Vacations listed. We'll take you there and take you there.

CANADIAN NATIONAL RAILWAYS

SERVING ALL 10 PROVINCES OF CANADA

CHOOSE FROM THIS RICH VARIETY. HERE ARE CANADA'S 10 TOP MAPLE LEAF VACATIONS

1. **Across Canada** [illegible]
2. **Alaska Cruise** [illegible]
3. **British Columbia** [illegible]
4. **Eastern Cities and Laurentians** [illegible]
5. **Hudson Bay** [illegible]
6. **Jasper in the Canadian Rockies** [illegible]
7. **Muskoka (Lake of the Woods)** — [illegible]
8. **Ontario Highlands** [illegible]
9. **Provinces by the Sea** [illegible]
10. **Romantic French Canada** [illegible]

[illegible] Kansas City, Los Angeles, Milwaukee, [illegible] Washington, D.C. Offices also in [illegible]

To help you plan your family's vacation in

NOVA SCOTIA

CANADA'S OCEAN PLAYGROUND

[illegible]

Overnight from Boston by Eastern Steamship Lines

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City

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City State

Enjoy an [illegible] Toronto by one [illegible] highways [illegible]

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Love [illegible] lovely [illegible] [illegible] relax

Visit old fishing ports, look on broad beaches along Canada's eastern shores.

Make the most of your holiday — travel, sightsee, relax in the refreshing new world north of the border. National Parks where wild life roams. Coastal and inland cruising grounds. Magic mountains. Ranging country. Cities rich in history and culture . . . See your travel or transportation agent meanwhile mail the coupon.

SEE ALL OF CANADA YOU CAN — this year!

[illegible]

CANADIAN GOVERNMENT TRAVEL BUREAU

[illegible]

Please send me your [illegible]

[illegible]

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[illegible]

Address

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18 sky-high thrills at Banff and Lake Louise

Travel by Canadian Pacific train, for service!

Make yours a real vacation! 1: No-drive [illegible] Canadian sky-high Rockies on Canadian Pacific [illegible] Thrills 2: Arrive refreshed at Lake Louise or Banff Resorts, in mile-high beauty!

3: Stay at Banff Springs, Canadian Pacific's highland castle. 4: A thoughtful business [illegible] new friends. 5: Dance to [illegible] name band. 6: Chef delights [illegible] trained servers. 7: Beauty all about [illegible] gardens, walks, soaring views. 8: Chairlift up Mt. Norquay. 9: And the world's most spectacular [illegible] on the Bow River!

At both resorts: 10: Swimming pools. 11: Stream or lake fishing. 12: Hikes, trail riding. 13: Putting greens. 14: Concerts, dance[illegible] 15: Color screen motion [illegible]

16. Stop at enchanting Chateau Lake Louise, facing the world's loveliest lake and dazzling Victoria Glacier. 17: Bus tours to Yoho Valley, Lake O'Hara, Columbia Icefield. 18. Great Alpine climbing, too.

Ask your travel agent about all-expense tours.

Tours in the Canadian Rockies begin at Banff or Field... include famous scenic trips, lodging and meals at Banff Springs and Chateau Lake Louise... 2- 4- 6-day tours, low as $44 to $100

A world of service: Canadian Pacific [illegible] European sailings, White Empress [illegible] to the Far East, New Zealand, Australia.

Canadian Pacific

[illegible] Canadian Pacific [illegible] U.S. and Canada

New Parker "51" pen

WORLD'S MOST WANTED PEN!

Choose this gift...and all will know your heart is in the giving!

● Just name your gift occasion! A New Parker "51" Pen is the perfect remembrance. Its distinctive beauty identifies it instantly. People of taste the world over acclaim it, desire it more than any other pen.

The special 14K gold point glides without coaxing. The magic of the exclusive Aero-metric Ink System brings new smoothness and ease. Even filling is easy. Truly this pen is decades ahead in design.

For practical giving with an extra flair, choose a New Parker "51". (Perfect for Servicemen.) See your dealer's Parker Spring Gift Showing. Colors: Lustraloy caps. Slim regular or slimmer demi-size. Pens, $15.00 up. Sets, $22.50 up. The Parker Pen Company, Janesville, Wis., U.S.A.; Toronto, Can.

Parker "51" plus name for the perfect gift

OTHER NEW PARKER PENS, FROM $5.75

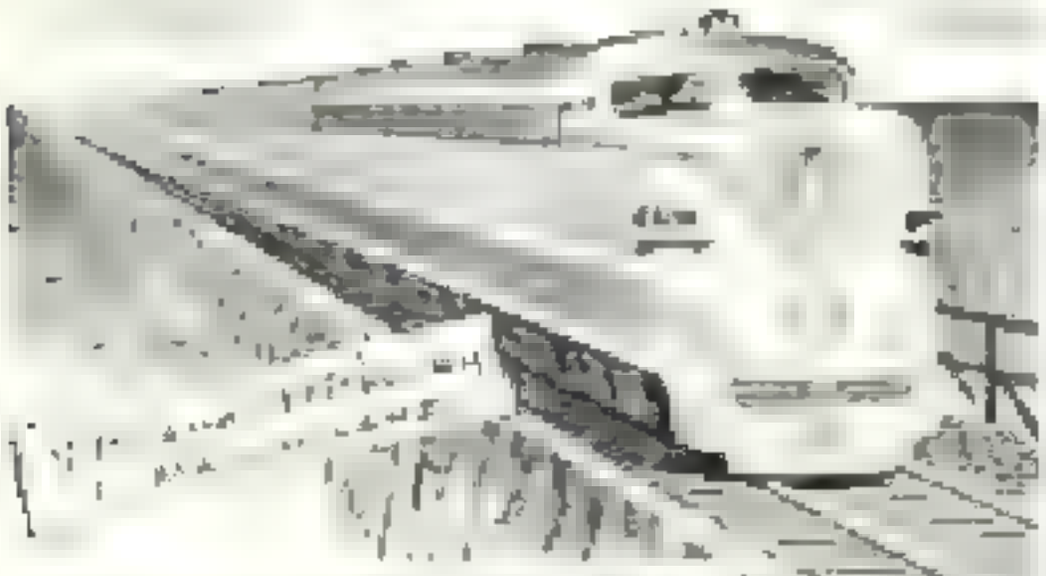
New Parker "21" Special [illegible]

New Parker "21" [illegible]

[illegible] pen needed. They can use any fountain [illegible]

I've been to California

on the "City of San Francisco"



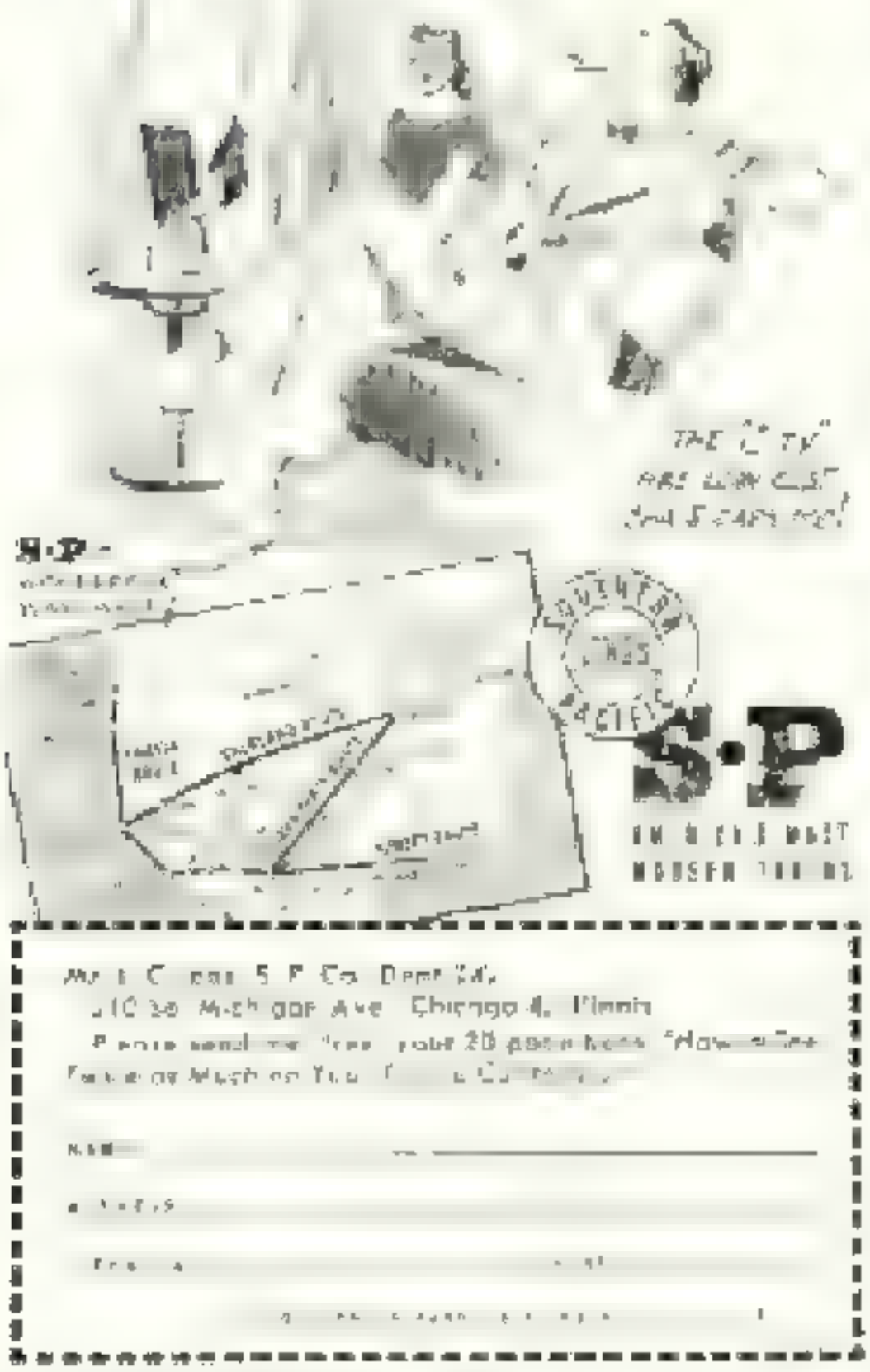
WE WENT TO SEA BY RAIL!

82 MILES ACROSS GREAT SALT LAKE HAD DINNER WITH A MARINE A FEW

THIS IS REALLY MORE PROMISES A STRAIGHT LINE IS THE SHORTEST DISTANCE BETWEEN THESE POINTS—

SAN FRANCISCO — CHICAGO

COMPLETELY FOR THE DAYS AND TWO NIGHTS EN ROUTE WONDERFUL COLD FOOD COURT COURTESY SERVICE PULLMAN LOUNGE MADE THE TRIP A PLEASURE ALL THE WAY.



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210 So. Michigan Ave. Chicago 4, Illinois
Please send me free your 20 page book "How to See Twice as Much on Your Next Trip"

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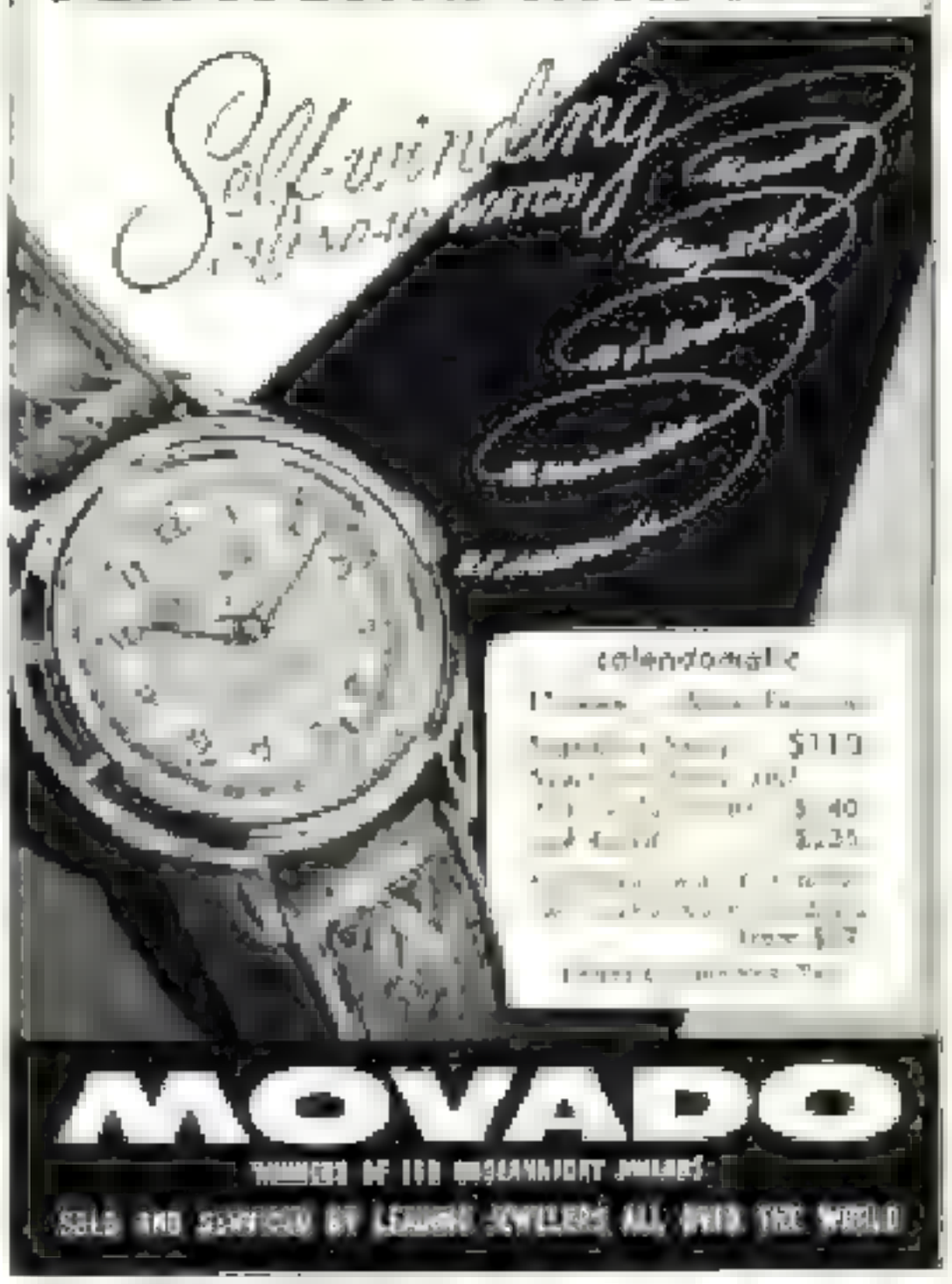

This crest is your guarantee of

Zenith Quality

...Quality that will never be sacrificed to the lure of low price

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

New Zenith "Paulding" Console TV [illegible]

Provision for coming UHF stations. Every Zenith TV set ever built has built-in provision to receive the coming new UHF stations without the use of a converter. No other Television manufacturer can make this [illegible]

[illegible]

Also Models of Zenith "Royal" and "Super Royal" Hearing Aids. Small, comfort, beautifully designed. Money back guarantee. Sold only through authorized dealers at $75

Zenith Radio Corporation, Chicago 39, Illinois
Backed by 33 Years of "Know How" in Radionics Exclusively

ZENITH RADIO CORPORATION

Does coffee bring out the beast in you?

1. A man can be cross as a bear when he's keyed up by the caffein in coffee. Jangled nerves make "bad dreams" border—bring on a man uneasy, on edge!

2. He's an easy prey, at night, to every disturbing sound. And will many coffee-drinkers in the same state. Caffein causes wakeful nights, jumpy days.

3. Sanka Coffee bath charms to soothe men and women upset by caffein! Delicious, flavorful Sanka Coffee is 97% caffein-free—it can't make you nervous!

4. Brings you back alive! With Sanka, you enjoy rich, full flavored coffee—without jitters. The price is priceless nights and tired days. Try it!

Product of General Foods

Sanka Coffee

Delicious coffee—and it lets you sleep!

Sold in drip and regular grind—and in the economical instant form. A jar of Instant Sanka makes almost as many cups as a pound of regular [illegible]. And remember—

Instant Sanka is the only instant coffee that's caffein-free!

New England Holiday "Chit Chat"

...with fun as the CENTRAL idea!

What a curtain-raiser to cool New England! [illegible] breakfast, with the white-steepled [illegible] breakfast, [illegible]

We split our time between seaside and mountainside! [illegible] Central [illegible] playground

FREE! 1952 Year-Round Travel Guide [illegible]

Please send me FREE Year-Round Travel Guide

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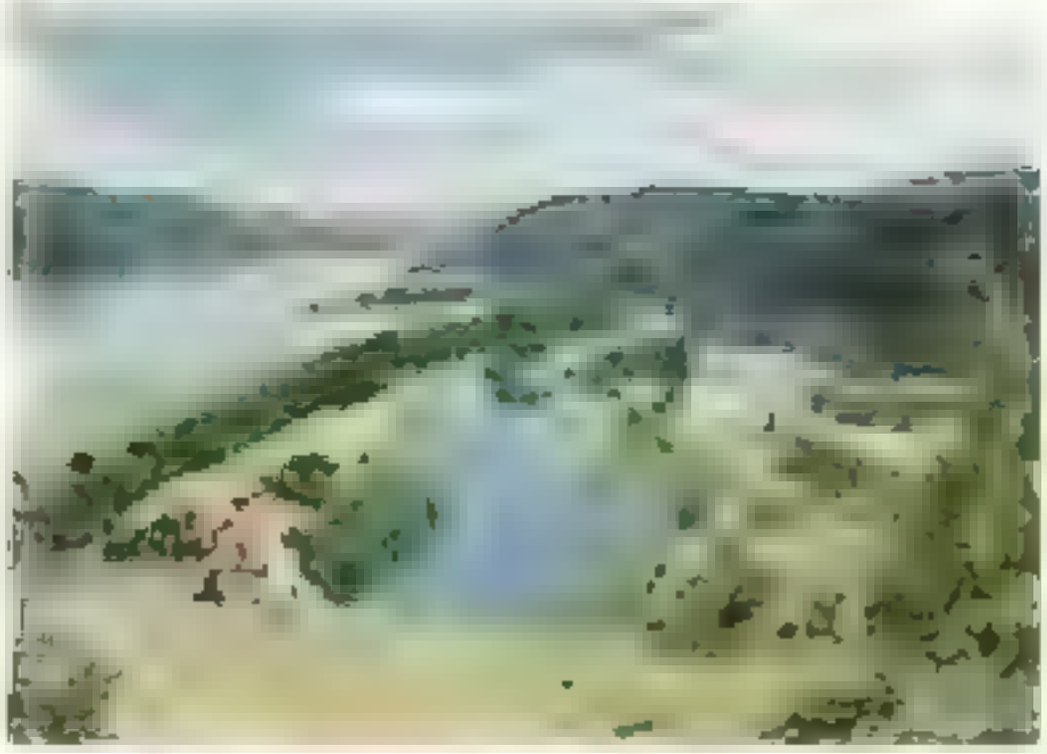
The Water Level Route — You Can Sleep

Great places to go...

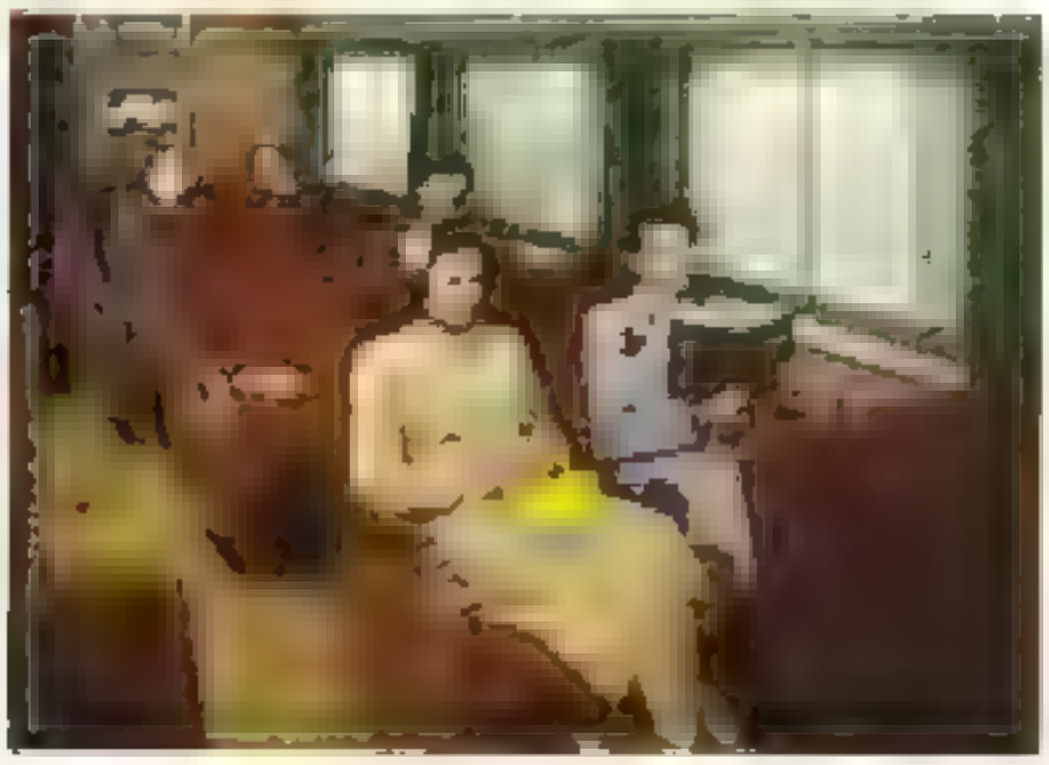
TEN FEET TO STAND ON A GLACIER [illegible] Glacier National Park.



SEE THE MIGHTY COLUMBIA RIVER [illegible] Great Northern.

2 Great Northern Trains get you there.

COMFORT AND FUN are twin favorites [illegible] Western Star [illegible]



DINAN [illegible] Great Northern [illegible]

for information on ☐ Glacier Park, ☐ Pacific Northwest, ☐ California, check, clip and mail to Great Northern Railway, Dept. N-52, St. Paul 1, Minn. Include name, address.

Great Northern's EMPIRE BUILDER

2 Great Trains WESTERN STAR

For today's Best Buys in pleasure trips use Greyhound's...

VPS

Vacation Planning Service

What's VPS? [illegible] Vacation [illegible] designed [illegible] special [illegible] If you want [illegible] Lodge, 2 nights at Yellowstone National Park [illegible] about Amazing America Tours, described below.

Hotels, Sightseeing, Transportation . . . all included in Expense-Paid Tours like these. There are hundreds more . . . at lowest prices!

FLORIDA CIRCLE

An 11-day adventure from Jacksonville to [illegible] Highway, Key West, St. Petersburg, St. Augustine. Ten nights hotel.

$77.80

SAN FRANCISCO

Learn the fascinating [illegible] this cosmopolitan city! See the Golden Gate Bridge, Presidio, Alcatraz Dolores, Chinatown. A 3-day trip, 2 nights hotel.

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OLD MEXICO

A 12-day escorted trip from San Antonio to Mexico City [illegible] Taxco, Puebla, Cuernavaca [illegible] deluxe hotel, 18 meals.

$145.40

NEW ENGLAND

Seeing Through Storybook places: visit Boston, Burlington, Portland, 8 days, 7 nights hotels, start from New York. [illegible]

$59.75

There's something about a

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that makes it the FRIENDLY way to travel!

FREE! Folder with 40 Pro-Planned Trips

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NEW TOURIST SERVICE
Also Available Special Low Fare
$333 Round Trip*
New-type, long-range Constellations

THE WORLD'S LARGEST NETWORK OF AIR ROUTES
Serving
70 Countries
On 6 Continents

EUROPE

AFRICA AND THE NEAR EAST

FAR EAST AND AUSTRALASIA

THE **MEN WHO FLY** the [illegible] AIR FRANCE [illegible] Constellations are veteran pilots [illegible] know [illegible] AIR FRANCE [illegible] delicious [illegible] luxurious [illegible] abroad.

Going Abroad?

ENJOY THE LAST WORD IN LUXURY AIR TRAVEL...

Go Air France!

GRACIOUS LIVING ALOFT: Stretch out [illegible] your soft "sky lounger" chair. Enjoy the [illegible] ness of the new type AIR FRANCE Constellation [illegible] ing. English-speaking stewards and [illegible]

WORLD'S FINEST AIR CUISINE: Exquisite [illegible] gourmet living.

"THE PARISIAN" [illegible]

"THE PARISIAN SPECIAL" [illegible]

AIR FRANCE
THE LUXURY WORLD-WIDE AIRLINE

SEE YOUR TRAVEL AGENT

AIR FRANCE [illegible]

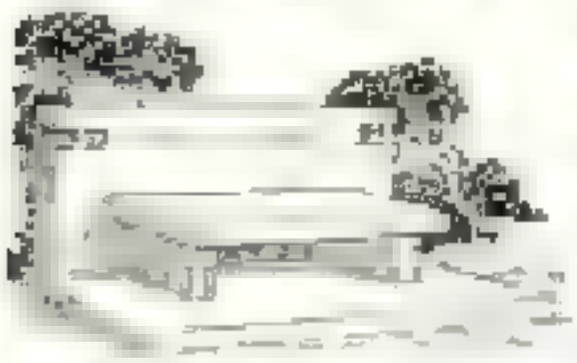
"TO THE MEMORY"

...evidence of a duty eloquently performed

[illegible] deserves perpetuation with a beautiful, enduring monument that stands [illegible] We do remember.

[illegible] Barre Granite community of craftsworkers in stone, it is now possible for any family to remember loved ones departed with a *permanent* monument of Select Barre Granite.

Your Barre Granite dealer can now offer a wider selection, underscore his sound advice in the choice of a fashioned Barre Granite monument identified by the etched-on Barre Guild seal.



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Free Booklet — *Write for "Monument Facts"* — *full of helpful information when you [illegible] a memorial. Barre Guild is a [illegible] of many [illegible]*

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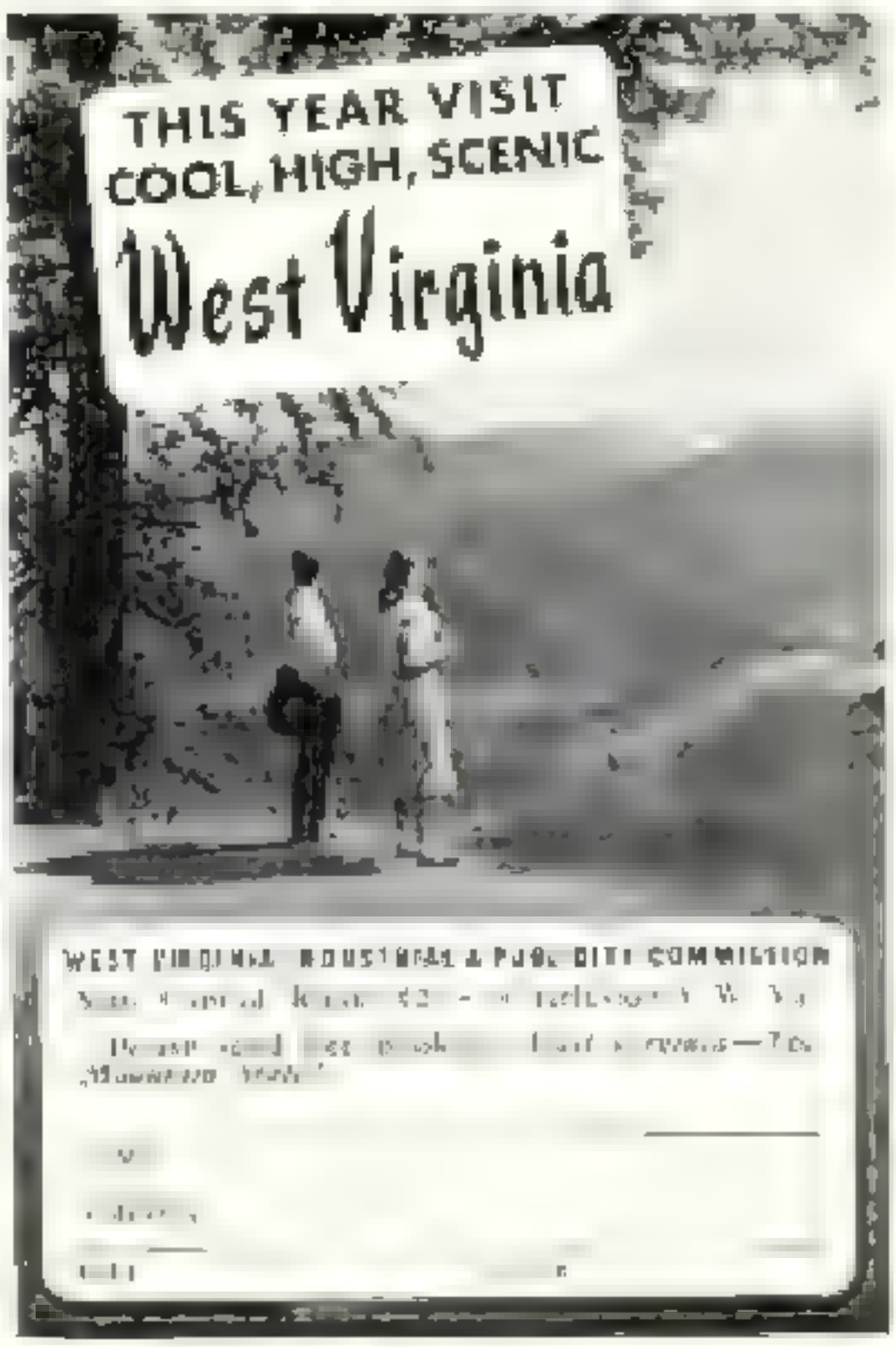

Some Common Fallacies About
HIGH BLOOD PRESSURE

High blood pressure, or hypertension, is a major cause of heart disease in middle-aged and later years. Directly or indirectly it claims the lives of about 200,000 of our citizens annually.

Yet, medical science can do much for people with high blood pressure. Doctors now know that certain false beliefs which cause people to avoid the treatment

ditions sometimes make treatment more difficult. Worrying or planning for illness with high pressure are believed to develop a cause mental conflicts — or unrest. Excess in overeating hypertension.

Listed below are some of the common fallacies about high blood pressure, and some medical facts which may be [illegible]

FALLACY #1

That an increase in blood pressure is always a sign of trouble. [illegible]

FALLACY #2

That nothing can be done to control high blood pressure. Far from it! [illegible]

FALLACY #3

That high blood pressure demands restriction in all activity. [illegible]

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...at age 60, 65 or 70!

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A $10,000 Cash Settlement policy at age 35 will cost you $251.40* a year if you plan to retire at 65. So if you pay this premium for 30 years, the total cost will be $8,142.*

At age 65, when you are ready to retire and your family has had the benefit of $10,000 life insurance protection for 30 years, you will automatically receive a cash payment of $8,240* in full settlement of the contract — $98 more than you will have paid.

OR

Should you have a sudden need for life insurance, you can elect to take a full paid-up policy in the amount of $10,000 plus $98 cash.

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A telephone call to your Travelers agent or broker will bring you full details of this policy. If you are not acquainted with the name and address of The Travelers agent or broker in your neighborhood, we will send it to you on request.

*Illustrations based on female lives.

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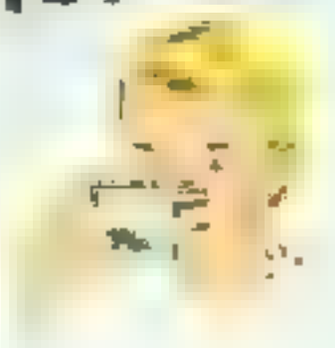

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In a way, you might admire Aunt Minnie. She just won't give in to her hearing loss—or even admit she has one.

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SONOTONE [illegible]

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5-51

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Dr. Charles E. Birch, White Plains, N. Y., physician, with the telephone that served him for 54 years.

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Retired also was the telephone which had served him well for more than half a century. One of the old-fashioned "gooseneeks," it had been installed in 1897.

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